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Keywords

Offshoring industry; Software; Professional and trade associations; NASSCOM; National elite; India

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Professional and trade associations in a nascent and formative sector of a developing economy: A case study of the NASSCOM effect on the Indian offshoring industry

By: [Nir Kshetri](#) and Nikhilesh Dholakia

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Abstract:

As important sources that shape institutional structures in an economy, professional and trade associations play significant roles in bringing and legitimating institutional changes. This paper examines the roles of professional and trade associations' impacts on institutions associated with a nascent and formative sector of a developing economy. In empirical terms, the paper offers an in-depth case study of India's National Association of Software and Services Companies (NASSCOM) on institutional changes related to the offshoring industry. The NASSCOM case shows that under appropriate conditions, professional and trade associations represent an alternative to the state in shaping the industry landscape.

Keywords: Offshoring industry, Software, Professional and trade associations, NASSCOM, National elite, India

Article:

1. Introduction

In a rich body of theory and empirical research, economics and management scholars have examined institutional pressures associated with professional and trade associations. In prior literature, researchers have noted that such associations constitute the "most elaborate and intricate organizational arrangements" (Scott, 1992, p. 253) and play a significant role in legitimating institutional changes (Greenwood et al, 2002). Notably lacking from this literature, however, is explicit attention to such associations' roles in nascent and formative sectors of a developing economy such as offshoring.

In order to understand professional and trade associations' roles in shaping a nascent industry in a developing economy (e.g., offshoring), it is important to examine such associations in relation to other institutional elements — most notably, the state. Note that the state is arguably the most important institutional actor (Bresser and Millonig, 2003; Groenewegen and Van der Steen, 2007). With regard to the state's role in influencing industry behavior in emerging economies, however, it is important to note that the rule of law is "often weakly developed" or sometimes "ignored with impunity" in such economies (Bratton, 2007). Second, in nascent and formative sectors such as offshoring, there is no developed network of regulatory agencies comparable to established industrial sectors (Powell, 1993). As a consequence, there is no stipulated template for organizing the corporate actors, and thus pressures for conformity are less pronounced (Greenwood and Hinings, 1996). In such settings, professional and trade associations may emerge to play unique and important roles in shaping the industry.

In this paper, we seek to identify clear contexts and attendant mechanisms associated with professional and trade associations' roles in shaping a nascent and formative sector of a developing economy. In specific terms, we examine such associations in the context of offshoring sectors in emerging economies. For empirical grounding of theoretical concepts, we provide a case study of India's National Association of Software and Services Companies (NASSCOM), that country's prominent and powerful software industry and professional

association, in transforming India's offshoring sector. It is important to note that NASSCOM has been a cornerstone of the Indian offshoring industry.

As much as it has been our goal to be clear about our purpose in writing this paper, it has also been important for us to be clear about what our purpose is not. In this paper, we focus on association-specific characteristics of a particular professional as well as the generic position of professional associations vis-à-vis regulative institutions in shaping a nascent and formative sector in a developing country. It is important to note that professional and trade associations influence industry behaviors directly as well as through indirect causal chains. First, these associations' norms, informal rules, and codes of behavior can create order, without the law's coercive power, by relying on a decentralized enforcement process where noncompliance is penalized with social and economic sanctions (North, 1990). Second, prior research also indicates that professional associations can work closely with state agencies to protect their self-regulating independence and autonomy (Greenwood and Hinings, 1996). In some situations, the state will collaborate with such associations to rationalize an arena of activity (Scott, 1992, p. 211). Professional and trade associations thus play an important role in strengthening the regulative institutions by providing the state with their expertise in developing new regulatory framework and strengthening the enforcement mechanisms.

In the remainder of the paper, we first provide an overview of the methodology used. Then, we discuss institutional contexts in emerging economies and roles of professional and trade associations in a newly developed economic sector. Then, we provide case study of India's NASSCOM, followed by a section on discussion of the case. The final section provides conceptual discussion and implications.

2. Methodology: case study

In broad terms, this paper employs case study method to understand contexts and mechanisms associated with professional and trade associations' influence on organizational arrangements in an emergent, high-growth economic sector of a developing economy (Montealegre, 1999; Orlikowski and Baroudi, 1991; Yin, 1989, 1994). More to the point, the approach of this paper is a hypothesis testing case study (Lee, 1989). Given the uniqueness of NASSCOM's roles in influencing behaviors of firms in India's software and service sectors and our idiographic assumption, we consider case methods as the most appropriate approach to study this phenomenon.

Yin (1989) suggests that the epistemological efficacy of case studies is justifiable when the research question focuses on reasons behind observed phenomena, when behavioral events are not controlled, and when the emphasis is on unfolding contemporary events. Other researchers argue that case research methodology is “appropriate and essential where either theory does not yet exist or is unlikely to apply, ... where theory exists but the environmental context is different ... or where cause and effect are in doubt or involve time lags” (Stuart et al., 2002).

A sampling approach that focuses on theoretically useful cases is needed in case-based research (Eisenhardt, 1989, 1991; Yin, 1984). In particular, best practices models are arguably good candidates for a case research methodology (Eisenhardt, 1989, 1991; Yin, 1984). In this connection it is worth noting that NASSCOM provides a ‘best’ practice model for professional and trade associations in emerging economies. Indeed, trade associations in the offshoring sector in other emerging economies are modeled after NASSCOM. Brazil's Associação Brasileira das Empresas de Software e Serviços para Exportação (BRASSCOM) is such an example. It is also worth noting that NASSCOM is described as “one of the most powerful trade bodies in India” (Mukhi, 2001). Moreover, Dewang Mehta, who was NASSCOM head from 1991 to 2001, was known as “one of the best lobbyists” in India (Mukhi, 2001).

We used multiple information sources. We collected and analyzed extensive secondary materials. It is important to note that there has been a good amount of media coverage on NASSCOM. In addition, both authors made field visits to India and interviewed companies involved in offshoring as well as policymakers.

3. Institutional contexts in emerging economies and professional and trade associations' roles

As noted above, the state is arguably the most important institutional actor and powerful driver of institutional isomorphism, since violations of laws and regulations can result in harsh sanctions (Bresser and Millonig, 2003; Groenewegen and Van der Steen, 2007). Against this line of argument, it could be claimed that national legal systems, especially in developing countries, are far from effective in directing organizations' conduct and behaviors. There are rampant instances of confusion or conflict in comprehending the meaning of the law. It is an accepted axiom that laws-on-the-books are ambiguous (Baer et al., 1988; Madry, 2005). Edelman and Suchman (1997) note: “the legal rules ‘cause’ the organizational practices (or vice versa) is, at best, a gross simplification”. Given the fluid context of state-enacted legal frameworks, windows of opportunity are created for non-state actors to step in and provide order.

Pressures from professional networks and industry associations are typically framed as normative in nature (DiMaggio and Powell, 1983,1991), entailing reliance on informal rules, codes, peer pressures and embarrassment of non-compliers (Ellickson, 1991; Greif, 1993; Hoffman, 1999; Lawrence et al., 2001; North, 1990). A profession is self-regulated by a code of ethics (Claypool et al., 1990; Cohen and Pant,1991), which require members to maintain higher standards of conduct than required by law (Backoff and Martin, 1991). Prior literature has indicated that professional associations also influence organizational arrangements through regulative and cognitive mechanisms (Greenwood et al., 2002; Scott, 1992, p.139). In addition to professional associations' direct roles in influencing their members' behavior, they also play indirect roles such as strengthening regulative institutions. For instance, professional associations provide the state with their expertise in developing new regulatory framework and strengthen enforcement mechanisms.

3.1. Professional and trade associations vs. the government in shaping a nascent and formative sector

As noted above, compared to established industrial sectors, in nascent and formative sectors (e.g., offshoring), there is no developed network of regulatory agencies (Powell, 1993). As a consequence, there is no stipulated template for organizing, and thus pressures for conformity are less pronounced (Greenwood and Hinings,1996).

Most obviously, developing templates and monitoring industry behavior are resource and expertise intensive in emerging economic sectors. Most developing country governments are, however, characterized by weak public administration, inadequate technical competence and political leadership in the implementation of economic and social policies (Pugh, 1999; Saez,1998). But there's another point that is perhaps even more important. The government's “subject positions” doesn't allow it to spend state resources to support a newly developing sector at the cost of competing sectors (Hoffman, 1999; Maguire et al., 2004). To put things in context, it is argued that offshoring has deepened social divisions in emerging economies (Aspden, 2006). This is because, in developing economies, while the outsourcing sector has become a new low-wage First World economy (Thurow, 2004) — thanks to elite education and modern technology (Ali, 2006), the traditional sector is economically disadvantaged. In some developing countries, there have been controversies about the impact of offshoring-led economic development on the poor segment of the population (Frankel, 2006).

In sum, while the government tends to lack resources, expertise and legitimacy required in developing new template and monitoring industry behavior, professional and trade associations' influences are likely to be more readily apparent. With well-focused priorities, professional and trade associations are likely to be better, more effective and more efficient institutions. In line with these arguments, the following proposition is presented:

Proposition 1. In an emerging economy, a professional or a trade association representing a nascent and formative industry is likely to be in a better position than the government in bringing institutional changes in the industry.

3.2. Association — government collaboration

Different institutional sources differ in terms of the nature of legitimacy and power. For instance, Vinogradova (2006) argues that formal associations' legitimacy can be mapped with “strategies of positive incentive”. Such strategies entail “threat of exclusion from future transactions”. On the other hand, traditional entities such as

courts, security firms, private arbitration, use of criminals and/or connections work by “strategies of coercion”, which are related to threat of physical and financial punishment.

Professional entities can be more powerful if they can influence legislation and push for other state-sanctioned actions (Campbell, 2004, p.146; Dickson et al., 2004, p. 83; Rogers and Streeck,1994; Streeck,1991,1997). Note that governments can successfully employ coercive power in introducing innovations and reforms in the market (Jepperson and Meyer,1991).

Prior research indicates that professional associations can work closely with state agencies to promulgate and protect the self-regulating independence and autonomy (Greenwood and Hinings, 1996). Professional and trade associations' participation in national policy making arena is critical for the success of the industries represented by such associations (Wood and Bloch, 1995). Collaboration with the government in enacting and enforcing laws may help the association reassure the public and clients that members are likely maintain high standards (Ward et al., 1993). In some situations, the nation state also finds it necessary to collaborate with professional associations in order to “rationalize” an arena of activity (Scott, 1992, p. 211). It is therefore proposed:

Proposition 2. To bring institutional changes, professional and trade associations in emerging economies collaborate with the government in strengthening the regulative institutions.

3.3. The state's regulatory and participatory roles

Sobel's (1999) conceptualization of “regulatory” and “participatory” state can be very helpful in understanding the dynamics associated with the roles of professional and trade associations in shaping industry behavior. These factors supplement economic determinants of the attractiveness of an economic sector of developing countries. It can thus be argued that participatory and regulatory states can reduce political risk and help attract jobs and investments in the offshoring sector. In this section we first develop a 2 × 2 typology concerning the states' regulatory and participatory roles from the standpoint of professional associations' influence on industry behavior (Table 1).

Table 1
Professional associations' influence in members' behaviors under different conditions of the state's regulatory and participatory tendencies.

		State's regulatory tendencies and mechanisms	
		Strong	Weak
State's participatory tendencies	High	I •Influence on industry behavior via direct as well as indirect effects (e.g., professional associations in the U.S. such as ACLU) ^a	IV •Associations' direct effects are more prominent than indirect effects (e.g., NASSCOM in the post-1991 India).
	Low	II •Associations' impact on industry behavior is relatively lower compared to the state's coercive roles (e.g., professional associations in China).	III •Room for breaking laws: associations mainly can play roles as institutional entrepreneurs (e.g., NASSCOM in the pre-1991 India).

^a In the U.S., in the early 2001, technology-industry lobbyists and consumer and civil-liberties activists including the American Civil Liberty Association, Electronic Privacy Information Centre and Consumer Federation of America circulated a letter to members of Congress and the president calling for a stronger set of privacy rules (Benson and Simpson, 2001).

3.3.1. Regulatory roles

By regulatory state, Sobel (1999) means a set of factors that influence the enforcement of contracts, the rule of law, the risk of expropriation, corruption of government, and bureaucratic quality. According to the International Country Risk Guide, a state with a strong regulatory role has “sound political institutions, a strong court system” and citizens that are “willing to accept the established institutions and to make and implement laws and adjudicate disputes”. Put differently, a strong rule of law is characterized by effective punishment of offenders (Oxley and Yeung, 2001).

In particular, it is important to emphasize that if business partners are engaged in relationships that are not long and deep, the recognition of contract law helps produce trust by providing recourse in the event of failure to honor a contract and thus lowers the transaction costs (Humphrey and Schmitz, 1998; Nichols, 1999; Reed, 2001; Stiglitz and Squire, 1998). An increased involvement in international business activities is likely to lead to shift from property transactions based on relationships to those based on formal and legal contracts (Nichols, 1999). Most obviously, the newness of the offshoring sector means that established and entrenched relationships are rare.

In this regard, it is important to note that while policymakers of many developing nations reassure the international business community of the commitment to the rule of law (Reed, 2001), the overriding reality seems far from satisfactory. In a survey of 23 African countries, Sievers (2001) found that governmental and judicial institutions were “lower than needed for sustained high growth”. Factors such as corruption, the quality of the rule of law, and the effectiveness of the national legal system in enforcing contracts acted as barriers hindering the development (Sievers, 2001). This reality is fundamental to the painfully low rate of FDI inflow in these economies.

It is also important to note that countries with weak rule of law lack standard identifiers like the U.S. Social security number making it difficult to check potential employees' backgrounds, which is critical for the success of the offshoring sector. In some countries, it costs up to \$1000 per employee to check backgrounds thoroughly (Schwartz, 2005).

Some researchers argue that professional associations represent an alternative to the coercive state (Vinogradova, 2006; Walzer, 1993). Note that one of the roles of professional associations is to monitor their members' compliance with normative and coercive expectations (Greenwood et al., 2002). Most obviously, when the state's regulatory roles are weak, trade and professional associations may fill the regulatory vacuum. To put things in context, for instance, developed world-based offshoring clients are more likely to rely on trade associations such as NASSCOM than on the weak, ineffective domestic state.

3.3.2. Participatory roles

The term “participatory state” captures the extent to which policies and institutions represent the wishes of the members of society (Sobel, 1999). In a participatory state, professional and trade associations carry enormous power to “bridge or link” their members' interests “with the formal and coercive decision-making power of the central state” (Hunter, 1993:123–124). These associations do so through “dialogue, litigation, and mimesis” (Edelman and Suchman, 1997).

Developing nations vary widely in terms of such participation. In Russia, for instance, business groups and professional associations can offer private arbitration services and may establish private arbitration courts (Greif and Kandel, 1995; Vinogradova, 2006). This enforcement mechanism has become a legal alternative to state courts (Vinogradova, 2006). In China, on the other hand, professional and trade associations are sanctioned by the state and many have party or government officials in their leadership (Dickson, 2003). Such structures are arguably designed to maintain the party's strong grip on the population. The above leads to the following:

Proposition 3a. The degree of collaboration between a professional or a trade association and the government is likely to be higher in a weak regulatory environment than in a strong regulatory environment.

Proposition 3b. Institutional changes that can be directly attributed to a professional or a trade association in an emerging economy are higher in a weak regulatory environment than in a strong regulatory environment.

Proposition 4. Professional and trade associations' efforts to bring institutional change are facilitated more by a government in a high participatory system than in one with a low participatory system.

3.4. Association specific factors

Professional and trade associations differ “socially, organizationally, and institutionally” in terms of their capabilities to facilitate diffusion of new ideas and to create revolutionary changes (Campbell, 2004, p.178). The concept of institutional entrepreneurship provides a dynamic framework to understand mechanisms associated with professional and trade associations' roles as institutional change agents. Daokui Li et al. (2006, p.358) define institutional entrepreneurs as those “who not only play the role of traditional entrepreneurs in the Schumpeterian sense, but also help establish market institutions in the process of their business activities”. A growing number of studies have suggested that entrepreneurs can change particular models of social or economic orders and construct new organizational fields — to institutionalize a model (Bartley, 2007; Daokui et

al., 2006; Svejenova et al., 2007).

A natural question is how institutional entrepreneurs initiate change. A valuable lead into this question is provided by Svejenova et al. (2007), who suggested four mechanisms associated with institutional changes: “creativity that generates continuous flow of new ideas; theorization that takes stock of these ideas; reputation within and outside the field that endorses ideas as worthy of attention, and dissemination that brings ideas to the public domain”.

3.4.1. Degree of eliteness of key individuals in the association

The concepts of political elite (Moore, 1979) or national elite (Higley and Burton, 1989) can be very helpful in understanding how business associations and professional entities can influence national policymaking. According to Moore (1979), the term political elite refers to “persons who by virtue of their institutional positions have a high potential to influence national policy making” (p. 674). Higley and Burton (1989) define “national elites as persons who are able, by virtue of their authoritative positions in powerful organizations and movements of whatever kind, to affect national political outcomes regularly and substantially” (p.18). Prior researchers have noted that corporate executives, labor unions and various interests groups can be parts of national/ political elites (Moore, 1979; Parry, 1969).

A related point is that a national/ political elite's effectiveness as an institutional entrepreneur is related to the elite's reputation “within and outside the field that endorses ideas as worthy of attention” (Svejenova et al., 2007). That is, reputation is about recognition by multiple communities and audiences. In sum, it can be argued that if key individuals in an association have a high degree of eliteness, they can bring substantial institutional changes at the industry level. Based on the above discussion, the following proposition is presented:

Proposition 5. A professional or a trade association's ability to bring institutional change is positively associated with the degree of eliteness of key individuals in the association.

3.4.2. Importance of arguments and actions directed towards diverse stakeholders

The success of an economic sector is a function of how multiple communities perceive this sector. In the case of offshoring, these communities include the public in the offshoring originating and destination economies, the government, law enforcement agencies, existing and potential employees, etc.

Institutional entrepreneurs' “subject positions” need to be dominant that can allow them to gain wide legitimacy, bridge diverse stakeholders and compel other actors to change practices (Hoffman, 1999; Maguire et al., 2004). It is important for them to mobilize external and internal constituents, have financial resources (DiMaggio, 1988; DiMaggio and Powell, 1991; Holm, 1995) and be able to communicate with other institutional actors in the system so that their initiatives are perceived favorably (Groenewegen and Van der Steen, 2007). Proactive programs involving outreach activities directed towards multiple communities are critical in the theorization process. Such activities can contribute to the objectification process or the development of a growing consensus of the value of a social structure and its increasing diffusion (Tolbert and Zucker, 1996). Thus, we propose that:

Proposition 6. A professional or a trade association in an emerging economy theorizes new practices through arguments and actions directed towards diverse stakeholders.

3.4.3. High performing and exemplar organizations as members of an association

If an association has high performing and exemplar organizations as its members, the association is more likely to possess capabilities to facilitate diffusion of new ideas and to create revolutionary changes. As noted above, creativity, which is related to the production of new ideas (Drazin et al., 1999), is critical for bringing institutional changes. It can be argued that a professional or a trade association's creativity is related positively to the existence of high performing and exemplar organizations. At this point, it must be emphasized that one aspect of offshoring sector in emerging economies that renders it interesting to us is the fact that the industry is rapidly evolving. While all professional associations define and redefine the domain of their professions — “the

portfolios of activities and services over which members claim jurisdictional exclusivity” (Greenwood et al., 2002) — through a reiterative processes, such processes are of greatest relevance for rapidly evolving economic sectors such as offshoring.

A related point is that theorization or “the development and specification of abstract categories and the elaboration of chains of cause and effect” is an important process through which institutional entrepreneurs facilitate the diffusion of new ideas (Greenwood et al., 2002:60). Theorization provides rationales for the practices to be adopted and thus increases the likelihood of acceptance of the practice (Strang and Meyer, 1993). Two key elements of theorization concern framing and justifying. Framing focuses on the need for change and justification is value of the proposed changes for concerned actors (Greenwood et al., 2002; Maguire et al., 2004). Individuals in high performing and exemplar organizations are more likely to be capable of framing a need for a change and justifying it.

Of equal importance in the discussion of professional and trade associations' role that follows below are indirect effects related to externalities that arise via what DiMaggio and Powell (1983) refer to as mimetic isomorphism (Table 2). Mimetic pressure entails mimicking behaviors of other actors that are perceived to be exemplar and have a higher degree of effectiveness (Dickson et al., 2004, p. 83; Lawrence et al., 2001). For example, Haveman (1993) found that savings and loan organizations followed diversification strategies that resembled those of successful firms within the industry. Burns and Wholey (1993) found that the adoption of matrix management by high-prestige hospitals influenced lower-prestige hospitals in their network to do the same.

Table 2
Professional associations' influence in maintaining established orders and creating new orders.

	Direct effects	Effects associated with indirect causal chains and externality
Maintaining established orders	•Enforcing industry codes	•Providing law enforcement agencies with expertise •Mimetic effects associated with high performing members
Bringing institutional changes	•Developing new industry codes and norms to account for shifts in technology, market and other external factors	•Help develop national regulative framework

It is reasonable to expect that professional and trade associations facilitate and accelerate mimetic isomorphism. For instance, several prominent theories argue that norm-like features such as those associated with professional associations are effective if behaviors are observable (Bendor and Swistak, 2001; Ostrom, 2000; Weiss, 2000; Terlaak, 2007). A related point is that learning from the experiences of others is a sensible and optimal strategy when means-end relations are not well understood (Strang and Meyer, 1993). Most obviously exemplar firms serve as models for smaller firms to imitate. In such a case, knowledge flow takes place by externalities (Audretsch and Stephan, 1996; Feldman, 1999; Niosi and Banik, 2005). It is important to emphasize that while mimetic isomorphism may take place in the absence of an association, the association is likely to accelerate the process by stimulating interaction among member companies. Beyond all that, the existence of exemplar firms also facilitates population-level learning. Miner and Haunschild (1995) define population level learning as "systemic change in the nature and mix of organizational action routines in a population of organizations, arising from experience" (p.118). It is thus proposed that:

Proposition 7. The existence of high performing and exemplar organizations in a professional or a trade association is positively related to institutional changes in the industry.

4. A case study: the NASSCOM effect on the Indian offshoring industry

NASSCOM is a nonprofit organization established in 1988 to facilitate software and services business and to encourage R&D. Table 3 provides a timeline with important events, milestones, shocks and rebounds in NASSCOM's nearly two-decade long history at the time of this writing. It is probably the most fully developed example of an association found in the offshoring sector of developing economies.

Table 3
NASSCOM's evolution: a timeline.

Time	Milestone	Remarks
1988	NASSCOM was established by 38 members as a not-for-profit organization. It was registered under the Societies Act, 1860.	The 38 members accounted for 65% of the revenue of the software industry at that time.
1990	NASSCOM began a public awareness campaign to educate software users and to encourage lawful use.	
1991	NASSCOM lobbying efforts led the Government to introduce Section 80 HHE in the Income Tax Act.	This allowed profits from software exports to be exempted from income tax (Preethi, 1999).
1991	NASSCOM lobbied with VSNL/STP and got high-speed data communications links (Preethi, 1999).	The high speed links helped to increase offshore development as a delivery model for software exports.
Early 1990s	NASSCOM teamed up with the Manufacturers Association for Information Technology to launch the Indian Federation Against Software Theft (InFAST).	
1994	NASSCOM and BSA setup the Anti-Piracy Hotline at New Delhi and a toll free number.	See: NASSCOM (2006)
May 1998	NASSCOM head Dewang Mehta was appointed as a member and spokesman of the high-power IT Task Force.	The Task Force was set up by the Prime Minister to draft a national IT policy.
1998	NASSCOM lobbied with the National IT Task Force to increase IT spending by government departments.	In 1999, the government issued guidelines, which required the government departments to spend 1–3% of their budgets in computerization.
May 1999	NASSCOM organized the first Indian conference on 'IT Enabled Services' in New Delhi.	The conference was attended by more than 800 people.
April 2001	Dewang Mehta, the NASSCOM chief, died.	
2004	NASSCOM announced its plan to have security practices of its members audited by international accounting firms (Engardio et al., 2004).	
2006	NASSCOM drafted plans for new legal measures to safeguard intellectual property and prevent data theft.	
January 2006	The National Skill Registry was launched, which allows employers to perform background checks on existing or prospective employees.	It is a voluntary registry for call center employees.
2007	NASSCOM's membership grew to 1100 including over 200 global companies.	They accounted for over 95% of the revenues of the Indian software and service industry.

Before proceeding further, it is important to note that a number of indicators such as those related to export performance and security and privacy in Indian IT industry point to the fact that India has made a significant progress on the offshoring front. Indian IT industry's revenue grew from \$4.8 billion in fiscal year 1997–98 to \$47.8 billion in 2006–07 (Indo-Asian News Service, 2007). Likewise, this industry was estimated to employ 1.6 million people in the early 2007 compared to 1.28 million in the early 2006 (Ribeiro, 2007). One would not typically expect developing country-based firms to have better security practices than those in the developed world. In light of the stereotypically different expectations that surround privacy and security in developing countries, it is important to note that security practices in India matched or exceeded those at most U.S. call centers (Engardio et al., 2004). Studies conducted by Forrester Research and by the U.K.'s Banking Code Standards Board indicated that standards in Indian call centers are among the best in the world and there were more security breaches in the U.S. in 2005 than in India (Precision Marketing, 2006).

Much of the credit of the remarkable progress in Indian offshoring firms' success goes to NASSCOM, which has played a phenomenal role in monitoring the industry behavior and bringing significant institutional changes. Leahy (2004) notes that “... in contrast to China's success in manufacturing, India's success in services has come in spite of the government rather than because of it”. In the vacuum of weak state-crafted frameworks, non-state actors such as NASSCOM have found openings. NASSCOM has helped establish responsible industry behaviors and its role in representing Indian software companies has been “exemplary” both abroad and at home (Express Computer, 2003).

Initially, 38 members started NASSCOM, which accounted for 65% of the revenue of the software industry at that time (NASSCOM, 2008). Professional and trade associations' importance increases as a large number of businesses become aware of their existence, and the benefits offered by their membership (Vinogradova, 2006). NASSCOM's success in guiding the industry and monitoring its members' behaviors has created a virtuous circle. As of 2007, NASSCOM's membership grew to 1100, which accounted for over 95% of the revenues of the Indian software industry (NASSCOM, 2008). NASSCOM's members also include over 200 global companies from the U.S. Europe, Japan, China and other countries. Members' annual fees are based on their IT software and services revenue, and these fees ranged from \$700 to \$18,000 in 2004 (Ticoll, 2004).

NASSCOM has established international affiliates in a number of countries including Australia and the U.K.

(Ticoll, 2004). NASSCOM also has full time personnel in the Indian Embassy in Washington, DC to lobby for the association (Rana, 2004).

NASSCOM monitors member companies to ensure they adhere to the standards. For instance, NASSCOM requires its members to self-police and provide additional layers of security. Non-compliant companies would lose memberships (Trombly, 2006). NASSCOM also coordinates and collaborates with other entities for its monitoring efforts. For instance, in the early 1990s, NASSCOM teamed up with the Manufacturers Association for Information Technology to launch the Indian Federation Against Software Theft (InFAST) to fight software piracy (Sharma, 1994). Similarly, NASSCOM announced its plan to have security practices of its members audited by international accounting firms (Engardio et al., 2004). Industry leaders also advocated the adoption of certification under the information security management systems (ISMS) of the British Standards Institution. The certification covers issues such as network security, data sanctity and terms of data utilization (Ravindran, 2004).

NASSCOM Foundation, the Corporate Social Responsibility division of NASSCOM, collaborated with TechSoup, a San Francisco-based nonprofit organization, to launch a technology assistance program for India's nonprofit and non-governmental organizations (Business Line, 2007). NASSCOM has also developed partnership with the government, companies, social organizations, policymakers and other stakeholders to develop public-private participation (Myiris.com, 2006).

Most obviously, the software and services businesses of Indian firms depend on heavy investment in sales, marketing and branding (The Economist, 2003). As is the case of most developing country-based firms (Choi, 1992; Lall, 1991), branding has been one of the major weaknesses facing NASSCOM members. Strengthening the brand associated with software and services offered by Indian firms has been of paramount importance to NASSCOM. To enhance the brand equity for Indian software and service industry, NASSCOM lobbied the Indian government (Rediff.com, 2001). These efforts have paid off brilliantly. India has succeeded in branding itself as the world's leading destination for not only relatively low end business process outsourcing (BPO) but also for high-end offshoring operations. For instance, multinationals such as GE medical labs and Hewlett-Packard research facilities are outsourcing high-end operations to India (Khanna and Mohan, 2006).

4.1. NASSCOM vs. government agencies in India in shaping the offshoring sector (P1)

As noted above, NASSCOM has played an important role in shaping the Indian offshoring sector. With regard to the state's role, it is worth noting an overriding reality in most developing countries — even if policymakers are interested in developing a modern economic sector (e.g., offshoring), the backwardness of competing economic sectors doesn't allow them to have a focused priority. In India, there have been controversies with regard to the impact of India's recent economic reforms, particularly the effect on the poor (Frankel, 2006).

As it happened in the Andhra Pradesh (AP) state of India in the late 1990s and the early 2000s, if policymakers allocate disproportionately more resources to develop the offshoring sector, they face stiff opposition from the mass of population that depends on the traditional economy. Political opponents attacked the then Andhra Pradesh Chief Minister Chandrababu Naidu's decision to raise rice and electricity prices by cutting subsidies as “anti-people”, and branded as elitist his promotion of offshoring related sectors and foreign capital (Chanda, 2000). Indian journalist Lionel Messias points out: “Government officials do not hesitate to point out that with IT gaining precedence over all other sectors in [AP Chief Minister Chandrababu] Naidu's scheme of things, little attention is being paid to agriculture, the main and proven base of [Andhra Pradesh's] economy” (cf. Malhotra, 2001). Naidu, the so-described “laptop” Chief Minister who played a pivotal role in the development of the state's IT industry including the offshoring sector, was voted out of the office in the May 2004 election. In such situations, professional and trade associations — working away from political limelight — are in a better position to bring about institutional changes.

4.2. NASSCOM's collaboration with government agencies (P2)

NASSCOM has collaborated with government agencies at various levels. Both the NASSCOM and the

government have benefited from such collaborations. Ex-NASSCOM head, Dewang Mehta helped 19 state Governments in India to draft their IT policies (Voicendata, 2006). NASSCOM partnered with the Ministry of Information Technology to draft data protection and data privacy laws to respond to privacy concerns of offshore clients (Hazelwood et al., 2005; Engardio et al., 2004). The goal is to bring Indian data protection laws to the same level as European and U.S. standards (India Abroad, 2004). NASSCOM is working with the Indian government and organizations in terms of crafting and enforcing laws to tackle computer-related crimes (IT Week, 2006). In 2006, NASSCOM drafted plans for new legal measures to safeguard intellectual property and prevent data theft (IT Week, 2006).

NASSCOM works with police officers, lawyers and industry bodies to ensure enforcement. NASSCOM meets with bar councils in different cities to educate legal communities, and holds meetings with police officers to educate them about cyber security and how to recognize and prosecute cybercrimes (Ticoll, 2004). NASSCOM started working with Mumbai police from 2003 (Saravade and Nandkumar, 2007). NASSCOM helped police departments of Mumbai and Thane in establishing a cybercrime unit and in training officers to investigate data theft (Indo-Asian News Service, 2006). Similar units were planned for other cities (Engardio et al., 2004). In 2005, NASSCOM announced a training initiative for Pune's cybercrime unit, which caught data crime perpetrators from Mphasis, a major ICT company (Cone, 2005). NASSCOM also offered to work with authorities in the U.K. and India to investigate cases involving identity theft (Tribuneindia.com, 2005). The Data Security Council of India (DSCI), a self-regulatory member organization set up by NASSCOM, has the ability to expel non-compliant members or call in police — another example of the association's growing regulative role (McCue, 2007).

NASSCOM asked the Indian government to create a special court to try people accused of cybercrimes and other violations of the country's Information Technology Act. The Indian government is considering NASSCOM's request in establishing such courts (Ribeiro, 2006).

4.3. Government's regulatory roles and NASSCOM (P₃)

India arguably has a stronger rule of law compared to China (Varshney, 2007). Yet, having said this, it is also apparent that — like most developing countries — in terms of implementation the legal systems in India are highly underdeveloped (Engardio et al., 2004). Most of the Indian economy is “backward looking, corrupted and poverty stricken” (MacDonald, 2006). Indian law on computer crime, for instance is “fuzzy”, and privacy enforcement is weak. As of 2006, no one charged for data fraud in India was convicted (Ribeiro, 2006).

Some of NASSCOM's roles are thus associated with India's weak regulatory environment. India has no law requiring the protections of personal data. For instance, while India's Information Technology Act of 2000 has set up criminal penalties for certain violations of confidentiality and privacy, these privacy standards do not apply to businesses or commercial enterprises (GAO, 2006). The act also does not include provisions for general data protection.

In an attempt to fill the regulatory vacuum, NASSCOM has introduced “assessment and certification” programs for would-be employees, which are expected to discourage illegal and unethical behaviors (The Economist, 2006). The National Skill Registry launched by NASSCOM in January 2006 is a voluntary registry for call center employees, which allows employers to perform background checks on existing or prospective employees (Trombly, 2006; Trombly and Yu, 2006). Creation of criminal and public records databases has been a part of the program (Fest, 2005). Potential employees can register their details in the database (Sawas, 2005).

NASSCOM worked for over a year and invested \$300,000 to launch an independent self-regulatory agency to improve privacy and data protection standards for the country's offshore IT services and BPO clients (Precision Marketing, 2006). The Data Security Council of India (DSCI), a self-regulatory member organization set up by NASSCOM, can expel non-compliant members or call police (McCue, 2007). The agency is funded by membership fees (Information Management Journal, 2006). In addition to speeding up the process of background checks, the new system — administered by an impartial third party — makes background checks

easier to accomplish, less expensive, and more accurate (Schwartz, 2005).

A key point related to a weak rule of law is that institutional entrepreneurs can take initiatives to break some rules. For instance, in 1986 when Texas Instruments (TI) proposed to establish a 100% export-oriented, foreign owned and operated subsidiary (its first outside the U.S.), India's Department of Electronics (DOE) and the government quickly processed the license, laws that prohibited such licensing notwithstanding. Evans quotes a DOE official: "We broke 26 separate rules to accommodate TI's Bangalore subsidiary and are willing to break more" (1992, p. 7). In this way, even before the 1991 liberalization, businesses in India had formed an intriguing partnership with key decision makers in the government.

4.4. Government's participatory roles and NASSCOM (P₄)

As to the participative role, it is important to note that the economic liberalization undertaken since 1991 has been a major driving force behind the growth and increased importance of trade and professional associations. Since the 1990s, there has been a shift from a state-dominated economic policy framework towards a decentralized one. Religious, social, economic and political associations have offered a viable set of examples encouraging the development of many new trade and professional associations (Frankel, 2006). A strong mutual interdependence between the state and the private economic actors, particularly organized business groups, has developed very quickly. The liberalization thus resulted in the shift of trade and professional associations' institutional location from Cell III to IV in Table 1.

There has been an increase in leadership support for NASSCOM. This has changed NASSCOM's pattern of interaction with the government and member companies, thereby enhancing its institutional centrality (Campbell, 2004; Scott et al., 2000). The economy is less centralized with more room for associations to flourish and to have a strong voice (Frankel, 2006).

A comparison of NASSCOM and China Software Industry Association (CSIA) is helpful in understanding how professional and trade associations differ in terms of "social, organizational, and institutional locations" (Campbell, 2004, p.187) and hence the degree of eliteness. In China, special interest groups and non-government entities are organized loosely (Li et al., 2004) and there is little room for these groups to influence national policymaking (Su and Yang, 2000). Chinese government's control arguably is a major obstacle to the autonomy and growth of associations in the country (Dickson, 2003; Frankel, 2006). Compared to NASSCOM, CSIA has thus played a relatively minor role in transforming structure and practices of Chinese companies (Shen, 2005).

The Indian government has fulfilled many wishes of NASSCOM members. For instance, the government responded favorably to NASSCOM's lobbying efforts against income tax on profits (Table 3). Links between industry and government have helped ensure new policy proposals that are 'enterprise-friendly' (Tessler et al., 2003). NASSCOM has been active in providing inputs to the government, seeking improvements in infrastructure for producing software, and promoting exports (Nidumolu and Goodman, 1996). There has also been political support for collective infrastructure needs (Pingle, 1999). In the late 1990s, NASSCOM's lobbying efforts with the government led to the announcement of guidelines for call centers to operate in the country. Nonetheless, the initial guidelines were not comprehensive and did not address all the relevant issues. NASSCOM continued its lobbying efforts for more comprehensive guidelines (Preethi, 1999).

4.5. Degree of eliteness of key individuals in NASSCOM (P₅)

Officials from NASSCOM member companies are among the most influential members of the Indian political elite. For instance, NASSCOM has representatives in various committees in the Central Government of India including the Ministry of Information Technology, Ministry of Commerce, the Ministry of Finance, Department of Telecommunication, Ministry of Human Resources Development, Ministry of Labor, and the Ministry of External Affairs. NASSCOM also acts as a consulting body for various State Governments. Former NASSCOM head Dewang Mehta was a member of the National Task Force on IT and Software Development and also a member of various bodies including IT ministry's advisory group, state planning boards, and Indian Institute of

Information Technology in Bangalore and Hyderabad (Rediff.com, 2001). NASSCOM's voice is thus heard clearly and loudly in the government (Ticoll, 2004).

Key individuals in NASSCOM have been recognized by multiple communities and audiences. NASSCOM members and its management teams have had some distinctive advantages leading to the associations' reputation. For instance, Dewang Mehta, who was the head of NASSCOM from 1991 to 2001, was named by Computerworld Magazine as "Software Evangelist of the Year" for three years in a row and "IT Man of the Year" in 2000. In 2000, he was also named by the World Economic Forum as one of the "100 Global Leaders of Tomorrow" (Parasher and Chatterjee, 2001).

4.6. NASSCOM's arguments and actions directed towards diverse stakeholders (P₆)

NASSCOM engages in theorization and dissemination activities directed toward multiple communities and audiences. Speaking of lobbying efforts with the government to enhance India's IPR regime, Dewang Mehta noted:

We lobbied with the government for changes in the Copyright Law. Although, the government at that stage, wanted to understand as to why we wanted these changes — as they thought it would benefit only the overseas companies. We said, maybe initially it would, but in the long run it would encourage Indians to create their own IPR. The government saw our point and in 1994, the copyright act was amended. On 10 May 1995 it was enforced (Preethi, 1999).

It is important to note that offshoring has raised the public's ire in the originating economies such as the U.S. In an attempt to alleviate the public's opposition to offshoring, NASSCOM has taken several measures. In 2003, NASSCOM widely publicized its study which indicated that IT outsourcing to India had improved U.S. employment figures (Communications of the ACM, 2003). To help counter the negative image of outsourcing, NASSCOM also hired the public relations firm Hill & Knowlton and worked with the latter to educate lawmakers about the negative implications of such measures and emphasized potential burden to U.S. taxpayers (Express Computer, 2003). NASSCOM also hired a former senior White House adviser, a former U.S. ambassador to India, as its chief Washington lobbyist (Giridharadas, 2007). In 2007, NASSCOM drew the attention of U.S. lawmakers to an Immigration Bill prohibiting companies with over 50 people from hiring H-1B employees if they have more than 50% employees with H-1B visas (Hindustan Times, 2007). A letter stated: "NASSCOM and the Indian IT industry clearly see this as a protectionist measure that will affect Indian IT companies, reduce the number of H1-B holders going to the US and reduce the competitiveness of the IT industry in the US" (Hindustan Times, 2007).

NASSCOM-BSA alliance works with software resellers to educate end-customers and companies about the negative effects of piracy (Sify.com, 2005). Likewise, NASSCOM launched CyberSafety Week, an awareness campaign, which aimed to educate computer users about cybercrimes (Saravade and Nandkumar, 2007). NASSCOM also holds regular "club" meetings in major cities. Dewang Mehta, ex-head of NASSCOM noted:

..[W]e invite the member companies, government officials, the press, leading IT users, politicians, bureaucrats, diplomats. It is a meeting ground where a lot of information is exchanged, people are able to talk frankly [over cocktails]. It creates a good understanding between people across segments, not only among members. We hold meetings very often, about six club meetings per year per city¹.

Next, consider NASSCOM's arguments directed towards offshoring related companies, encouraging them to join the association. Speaking of importance of the membership in the new body, the Data Security Council of India (DSCI), a self-regulatory member organization set up by the association, NASSCOM President, Kiran Karnik put the issue this way: "While it would be voluntary for the members to be part of the body, it would ensure at the same time that market forces make it mandatory for companies to register themselves" (Business Line, 2007). Note too that a professional association's enforcement strategy becomes efficient and powerful if a large number of firms in the industry join the association (Vinogradova, 2006). NASSCOM members supported

the new body enthusiastically. As of 2006, over 1000 companies accounting for 98% of the Indian IT industry agreed to take DSCI membership (MarketWatch: Global Round-up, 2006).

4.7. The existence of high performing and exemplar organizations (P₇)

Most of NASSCOM's success can be attributed to its effective management team. NASSCOM has been led by representatives from India's high performing organizations. In this regard, it is important to note that the China–India difference in the offshoring sector is powerfully illustrated in industry structures. For instance, average size of software firms in terms of the number of employees is 25 in China compared to 174 in India (Kshetri, 2005). Likewise, most companies in the Chinese offshoring sector have fewer than 1000 employees compared to 292,000 combined headcount at India's top-5 firms — with the top firm TCS employing 83,500 people representing 60 nationalities (Press Trust of India, 2007). As noted above, the existence of high performing and exemplar organizations has helped transform the behaviors of firms in the Indian offshoring sector. In fact, NASSCOM's role in India goes much beyond the domain of software and services. For instance, NASSCOM officials have provided powerful lobbying for the Indian venture capital industry (Uttam, 2005).

5. Discussion

Before proceeding, it is important to note one thing: NASSCOM is not a typical industry association. Although there are many developing world based industry associations established to bring institutional changes, few have done their jobs more skillfully than by NASSCOM. The association unfailingly showed its capability to monitor the members' behaviors.

Prior researchers have noted that associations have to depend on the state to achieve some of their goals (Walzer, 1993). The NASSCOM case shows that due to the relatively weak coercive power of industry associations, such associations may turn to stronger regulative institutions such as the court systems and police to enforce the substance of legal claims.

Lawrence et al. (2002) argue that generation of proto-institutions — “new practices, rules, and technologies that transcend a particular collaborative relationship and may become new institutions” — is important to bring institutional changes. The research literature provides abundant evidence that an institutional change measure is more likely to be successful if attention is paid as to how the measure is embedded in the “wider institutional field” (Lawrence et al., 2002). In this regard, it is important to note that NASSCOM's institutional change measures are viewed as a part of larger and more complex policymaking arenas that transcend the offshoring sector. NASSCOM has emphasized the importance of the Indian ICT industry's economic contribution. NASSCOM has framed offshoring as an avenue of job creation for a seemingly bottomless source of the Indian labor force. In a study, NASSCOM estimated that call center and back office operations would create one million jobs by 2008 (Ghosh, 2001). The NASSCOM Foundation's measures and its partnership with the government, companies, social organizations, policymakers and other stakeholders to develop public–private participation as noted above illustrate the generation of proto-institutions. Prior researchers have also noted that “dissemination that brings ideas to the public domain” is critical to bring institutional changes (Svejenova et al., 2007). In this regard, dissemination measures such as CyberSafety Week (Saravade and Saravade, 2007) and those related to counter the negative image of outsourcing in origination countries (Express Computer, 2003) have strengthened proto-institutions. NASSCOM ex-head, Dewang Mehta put the issue this way:

..[I]n 1991, when I used to say, we are a lobby group, people used to take offence. How can you call an association a lobby group? But we were honest. We were not lobbying for something that was a vested interest. We were lobbying for something that was good for the entire industry, good for the country as well as good for the people of the country. That is the philosophy at Nasscom. We do not lobby for something that is only good for the industry, but is not good enough for the country or the people of our country (Preethi, 1999).

One of the most straightforward explanations for NASSCOM's success in promoting and reinforcing desired industry behavior is its employment of diverse strategies. In addition to its role in developing and enforcing

industry codes and standards, NASSCOM has successfully collaborated with the government and law enforcement strategies. In this way, “strategies of positive incentive” are combined with “strategies of coercion” (Vinogradova, 2006).

As noted above, starting the early 1990s, NASSCOM took a wide variety of measures intended to strengthen the country's intellectual property rights (IPR) regime. These measures have paid off brilliantly. Strong copyright laws have facilitated firm-level innovations in the country (Varshney, 2007). It is important to note that foreign MNCs are more confident to outsource activities involving IPR and sensitive business information to India than to China (The Economist, 2006). A similar point can be made about the development of capital market (Varshney, 2007). In China, local politicians hinder mergers and consolidation, especially the ones involving firms outside their regions, while NASSCOM encourages such activities in India (The Economist, 2006).

It is also worth noting that from the perspective of the development of modern economic sectors (e.g., offshoring industry) in a developing economy — sectors that resemble the First World-type economy (Thurow, 2004) — a participatory state can cut both ways. In India's case, federal and state governments have fulfilled many wishes of NASSCOM members (e.g., favorable response to NASSCOM's lobbying efforts against income tax on profits, support for collective infrastructure needs and development of guidelines for call centers). The Andhra Pradesh state example noted above, on the other hand, indicates that the mass of population depending on the traditional economy may vigorously oppose the elite, modern sector if disproportionately more state resources are allocated to develop the offshoring sector.

Special creative ideas from NASSCOM include deployment of full time personnel in the Indian Embassy in Washington, DC, to lobby for the association (Rana, 2004) and inviting different stakeholder groups over cocktails to exchange information and ideas (Parthasarathy, 2004). Other highly creative ideas are demonstrated in dissemination measures such as CyberSafety Week (Saravade and Nandkumar, 2007) and those taken to counter the negative image of outsourcing in origination countries (Express Computer, 2003). In 2003, NASSCOM also identified six untapped areas in offshoring (Siliconindia, 2003).

Several limitations of this research and boundary conditions must be recognized in a balanced discussion of its findings. Before proceeding further, it will be useful to distinguish between statistical generalization in survey research and analytical generalization in case studies (Harrison and Freeman, 1999; Yin, 1994). In analytical generalization, the investigator attempts to “generalize a particular set of results to some broader theory” (Yin, 1994, p. 36). The reliance on a single case limits the analytical generalizations that can be drawn from the findings discussed above. Analytical generalizations about professional and trade associations' roles in bringing institutional changes in other emerging economies thus must be made with caution. This is because our investigation builds on a study of specific factors associated with NASSCOM and the Indian economic and political systems.

First, proposition 1 stated that a professional or a trade association is likely to be in a better position than the government in bringing institutional changes. The relative importance of state in bringing institutional changes may increase with the state's level of involvement in the economy. The reason why CSIA has played less important role than NASSCOM in shaping the Chinese IT industry is perhaps because of the state's deeper entrenchment in the Chinese economy. For instance, according to UBS, the state accounts for at least 70% of the Chinese economy compared to less than 7% in India (Pei, 2006). As of 2001, in 70% of large- and medium-sized “corporatized” enterprises, the communist party members were in the board of directors (Pei, 2006).

Second, the extent to which a developing world-based government places emphasis on and derives its legitimacy from economic growth affects professional and trade associations' ability to influence legislation and push for other state-sanctioned actions. Note that the government has to deal with the demands of competing institutional actors. Some nascent and formative sectors such as offshoring are associated with economic growth. If a government considers distributive justice (e.g., focus on the poor, a higher level of attention to

traditional sector such as agriculture) more important than economic growth, it is less likely to be influenced by professional and trade associations in the formative sectors such as offshoring.

Table 4
Conditions related to rule of law and legal system in selected offshoring destination economies.

Country	Rule of law index (2002)	Legal system
Argentina	−0.73	Mixture of U.S. and West European legal systems.
Barbados	1.43	English common law.
Brazil	−0.30	Based on Roman codes.
China	−0.22	Based on civil law system, derived from Soviet and continental civil code legal principles.
Hungary	0.90	Based German–Austrian legal system.
India	0.07	Based on English common law.
Oman	0.83	Based on English common law and Islamic law.
Pakistan	−0.70	Based on English common law with provisions to accommodate the country's status as an Islamic state.
Philippines	−0.50	Based on Spanish and Anglo-American law.
Romania	−0.12	Based on civil law system.
Russia	−0.78	Based on civil law system.

Sources: Rule of law index is from Kaufmann et al. (2003). The index has a mean of zero, a standard deviation of one, and ranges from −2.5 to 2.5. A higher or positive value indicates a stronger rule of law. Legal systems are from The Central Intelligence Agency's (CIA) The World Factbook (<https://www.cia.gov/library/publications/the-world-factbook/index.html>).

Third, developing economies differ in terms of the type of legal and political systems and the society's propensity to change. As Table 4 indicates, offshoring destinations differ widely in terms of the rule of law indicators, which “measure the success of a society in developing an environment in which fair and predictable rules form the basis for economic and social interactions” (Kaufmann et al., 2003). Professional and trade associations' role in bringing institutional changes may vary across economies with different levels of the rule of law indicators and different types of legal systems. To illustrate this, we now call attention to situations in developing economies with legal systems influenced by Islamic law such as Pakistan and Oman. Consider Oman, where CBay Systems, the world's third largest medical transcription service provider has invested, in a BPO venture (Company News Feed, 2007). Oman is considered to be a holistic society (Kshetri and Ajami, 2008). Note that a holistic society is often characterized by an ideology (e.g., Islam) that “claims validity for all spheres of action and thought” and an action's legitimacy is evaluated on the basis of a “general binding moral prescripts imposed by a superior authority” rather than by economic, political or juridical logics (Zweynert and Goldschmidt, 2006). Compared to an “extended” society, institutional change measures are likely to face more resistance in a holistic society (Kshetri and Ajami, 2008). Note that in Oman and many Arab economies, on most political issues, the monarchs are arguably “more liberal than the societies over which they reign” (Zakaria, 2004, p.1). Deliberations in the parliaments of these countries tend to focus more on social than economic and political issues (Kéchichian, 2004). Professional and trade associations' participation in national policy making arena is thus likely to be limited in a holistic society. Likewise, in a holistic society, institutional entrepreneurs tend to possess limited capability to bring institutional changes.

Three further observations are worth making regarding the Indian legal system from the standpoint of offshoring. The first observation is that as is the case of the U.S., the Indian legal system is based on English common law (Table 4). The compatibility of legal systems is thus likely to facilitate the inflow of outsourcing jobs from major outsourcing origin economies with similar legal system such as the U.S. and the U.K. (Gray, 2007). Second, India's rule of law index is much higher than its major competitors such as the Philippines, China and Pakistan. Emerging economies with stronger rule of law than India (e.g., Barbados, Hungary and Oman), on the other hand, may have a lower level of factor endowments needed for the growth of offshoring sector. Third, as to the fairness and predictability of the judicial process and enforcement mechanisms, there are reasons to believe that India's position vis-à-vis other emerging economies is better in the offshoring sector than in other economic sectors. New regulative measures (e.g., the government's consideration to create a special cybercrime courts and the DSCI's involvement in enforcement mechanism) illustrate the strengthening regulative institutions in the offshoring sector.

Finally, there is the issue of fairness. The strength of rule of law is a function of how citizens perceive the fairness of the legal system and how willing they are in obeying the laws (The FBI Law Enforcement Bulletin, 1997). This insight can be extended to institutions associated with professional and trade associations. Members' perceptions of an association's fairness in enforcing informal rules and codes influence their willingness to obey them. Put differently, if member companies perceive that the association has acted unfairly

in devising and enforcing codes, the association's ability to bring institutional changes will be limited.

6. Conclusion and implications

This paper provided novel and unique insights related to professional and trade associations' roles in a rapidly emerging economic sector of a developing economy. The overarching message conveyed by our theory is that in a rapidly developing economic sector of emerging economies, under certain conditions, professional and trade associations are likely to be relatively more effective than the government in developing templates and have powerful impact on members' behaviors. For instance, NASSCOM has conceived what type of industry behavior is acceptable to clients based in the developed world. In addition to direct influences, professional associations influence industry behaviors through longer causal chains and externality mechanisms. For instance, India's offshoring sector has some successful firms. Externalities unique to the offshoring industry have helped improve industry behavior.

It is an accepted axiom that an industry's success is a function of its ability to realign with and adapt to the changes in major shifts in technology, market and other external factors (Kumaresan and Miyazaki, 2001). As noted above, due to the inadequate technical competence (Pugh, 1999) and a lack of funds and resources (Saez, 1998), developing country governments are ill prepared to help industries realign with and adapt to the changes in the environment.

Institutional changes discussed above have different degrees of substantiveness. For instance, as noted above, the Indian government is considering NASSCOM's request to create a special court to try people accused of cybercrimes and other violations of the country's Information Technology Act (Ribeiro, 2006). Likewise, NASSCOM has gained political support for collective infrastructure needs (Pingle, 1999). This means that the government has taken at least symbolic actions. Theorists argue that a symbolic change may lead to more substantive changes subsequently (Campbell, 2004, p. 43; Edelman, 1990, 1436–37; Forbes and Jermier, 2001, 208; Guthrie, 1999, xii; Oakes et al., 1998).

Future research on this topic should help us better understand the phenomenon of professional and trade associations that are becoming pervasive in the rapidly growing global offshoring industry, and perhaps to find better ways of managing it. Future research based on the present framework can be extended to other emerging economies and/or economic sectors. Other national settings might differ from the offshoring sector examined in this paper in terms of factors such as the degree of newness, development of regulatory frameworks, and pressure for customer-centric behaviors.

Different theoretical contributions and various empirical studies have led to the accepted view that the government's supportive role through such mechanisms as new laws, investment incentives, foreign technology transfer, and other supply–push and demand–pull forces (King et al., 1994; Kraemer et al., 1992; Montealegre, 1999) play an important role in the development of an ICT industry. In this initial model, we did not extensively pursue this line of reasoning for the sake of simplicity. It may, however, be an area to examine in the future when constructing more complete and complex model of professional and trade associations' influence in industry behaviors.

Research conducted across various settings (e.g., American brewery population (Baron, 1962) and the Argentine newspaper population (Carroll, 1987:135)) indicate that organizations established in an adverse environment are able to experience collective learning and possess capacity to survive after the “adolescence” stage (Swaminathan, 1996). It is important to note that many NASSCOM members also dealt with adverse conditions. For instance, visa regulations against Indian software professionals, particularly in the U.S. in the early 1990s, forced Indian companies to opt out of the “body-shopping practice” and to do works in India (Behari, 1994). This helped enhance their IT skills thereby bringing competitiveness in its IT exports. These external factors' influence on NASSCOM members' performance might also be worthwhile target of study.

One issue that was raised in this article but not fully developed was about effects on the industry behavior via

mimetic isomorphism. One avenue for future research thus would be to examine the difference in the nature of mimetic isomorphism in companies that are members in professional and trade associations (e.g., NASSCOM) and those that are not members.

The NASSCOM case shows that the association helped the government develop new regulatory frameworks and enforce laws while performing some of the regulative roles. In this regard, our work also opens new areas of research related to a typology in terms of the regulative roles that are enforced by the government versus those that are enforced by the professional and trade associations.

Finally, one of the important goals of NASSCOM was to enhance the brand equity related to the Indian offshoring sector. In this regard, researchers could also look at NASSCOM's activities from a collective industry and national level brand building perspective.

Notes:

1 Parthasarathy's (2004) interview with late Dewang Mehta, former Secretary, NASSCOM.

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