Organizational Factors Influencing Inclination to Use a B2B Website by a Buyer-Supplier Dyad: The Indian Context

Merlin Nandy[*]

Senior Solution Manager, IBM India Private Ltd., India

A B S T R A C T

Business-to-Business electronic commerce websites are a common form of inter-organizational systems that span organizational boundaries and enables organizations to exchange information in a seamless fashion. To reap the desired benefits it is important that the website be used in the intended manner. The level and extent of use of a business-to-business website depends partly on the inclination to use the website by the users in the primary organization and in the user organizations independently and the combined inclination of the organizations together. This combined inclination is referred to as the System Inclination, with dominance playing a key role. Each organization has certain characteristics of its own and may differ significantly in their inclination to use. It is important to analyze the factors that determine this inclination to use, so that organizations can adopt appropriate management mechanisms to control it. This paper proposes a framework to explain the organizational factors and their influence on the inclination to use a website, based on study of four Indian buyer-supplier dyads. Inclination to use is found to be influenced by factors like top management support, website characteristics, adequate support mechanisms, user group orientation towards electronic commerce and basic IT drive among the employees, at both the primary and user organizations.

Keywords: Business-to-Business (B2B) Electronic Commerce, IT Use, B2B Website Use, Case Study

Ⅰ. Introduction

1.1. Motivation

Electronic commerce (EC) has witnessed very rapid growth in the last decade with organizations in-creasingly connecting with their buyers, sellers, partners and other stakeholder over the Internet. The global business-to-business (B2B) EC market was valued at US$10.6 trillion in 2018 which is over 5 times that of the B2C market (Statista, 2018). B2C EC has seen widespread adoption across the globe

*E-mail: merlin@email.iimcal.ac.in Tel: 916746626500

but B2B EC has been evolving over the years and has seen a dramatic growth. The revenue distribution is however not equal across the world. Currently, Asia Pacific is leading the way with a market share of almost 80%, leaving North America and Europe far behind (Statista, 2018). The Indian B2B EC market is expected to reach $700 billion by 2020 (Babita, 2014). B2B EC applications include websites, web services, electronic data interchange (EDI), electronic auctions, negotiation support systems, agent-based negotiation systems, online marketplaces etc (Bermudez et al., 2014; Chen and Holsapple, 2013; Gharib et al., 2017; Wang and Cavusoglu, 2015). Gary (2016) in his paper cites that the focus of the academic research has been more on B2C marketing instead of B2B. Cortez and Johnston (2017) studied the history of B2B marketing and proposed that research efforts should be focused on areas like customer journey, relationship value, harnessing technology, innovation, data analytics and industry context. Wiersema (2013) highlighted that some E-business applications impacted positively on supply chain collaboration whilst some did not, across a buyer-supplier boundary. The focus of our study is B2B EC websites hosted by an organization for interacting with their buy-side and sell-side stakeholders, where the Internet is adopted as the medium for this interaction. Suppliers and customers are independent organizations with different cultures and characteristics. In this paper, we have considered the concept of dyads or paired organizations i.e., a primary organization (PO) implementing the website and its supplier/buyer as the user organization (UO). They together form the 'system' of users. The benefits of any website can be derived only if the website is used in the manner planned after it is implemented by the PO, and that depends in part, on the inclination to use the website by the system of users. Firms may vary considerably in their use of a website or any other form of IOS, and it is critical to understand why they do, to be able to achieve the desired outcomes. Identifying these factors would help organizations to develop the right level of inclination using suitable mechanisms that would lead to the desired level of website use.

1.2. Research Objectives

While the currently available research studies do describe some factors which influence the phenomenon of Internet adoption and use by an organization, they do not discuss the collective influence of the factors on the phenomenon. The studies also do not explain the nature of their influence on the level of Internet adoption and use. Therefore, these studies do not lead to concrete managerial implications or actionable advice for managers. There have been several studies on B2B EC adoption but none specific to use of the applications after they are adopted and implemented (Masoumeh et al., 2018). With the growing potential in the B2B EC market in India, organizations need to understand how to tap this potential and also drive its use successfully in the organization. While there has been several studies on B2C website use and the factors that influence the same, there are significant differences when compared to B2B. B2C users are individuals and are different from B2B users who are business users. Consumers markets are different from business markets, the nature of the customers is different, the buying process is different and so is the volume of transactions. The buying is planned and decision process more structured in the case of B2B.

This paper addresses the following two research questions:

1. What are the organization factors that impact the inclination to use a B2B website?
2. How do these factors individually and collectively, influence the inclination to use a B2B website?

The objective of this study is to develop a framework to analyse the factors that influence B2B website use by the business users in a dyad. The framework will enable us to adopt suitable control mechanisms to control the factors and influence the inclination of the users towards using the website. Several factors emerged from various models during the literature review that described different aspects of B2B Internet commerce like trust, risks, organizational factors, user characteristics and environmental factors. The exploratory study investigated four Indian organization dyads, the PO (deploying the website), and their corporate user (corporate customers or dealers, suppliers) organizations, UO. The study has gathered data mainly through in-depth interviews of website users, the website management team in the primary organization and regular business users of the website in the user organization. The inclination at the group level reflects at the organization level which further translates into inclination at the buyer-supplier dyad level. The combined inclination to use the website by the PO and the UO has been referred to as System Inclination (SI). The role of partner dominance comes into play while determining the SI of the buyer-supplier pair together.

The paper is structured as follows. We start with a review of the literature on B2B website adoption and use and the various organizational, technological and user related factors that impact the inclination to use a website. This is followed by a detailed description of the research methodology adopted and a brief description of the case study organizations. The third

section follows with a detailed analysis and discussion of the construct System inclination along with the lower level constructs that influence it. Lastly, the paper concludes with the limitations and implications for research and practise and scope for future research opportunities.

Ⅱ. Conceptual Background

The following factors emerge from a review of the extant literature. Major contributions have been from field of IS Implementation and use, IOS adoption, EC adoption and website use.

2.1. Electronic Commerce Adoption and Use

IT implementation and use literature in general and electronic business adoption literature has a significant contribution to this study especially in terms of analysing the characteristics of end-users who use the B2B system or application. These factors are mostly related to the individual's personality traits and to a lesser extent to organization characteristics. Adoption and use are two distinct stages in the implementation cycle of any IT application with common factors that play a role in both stages (Grover and Saeed, 2007).

It was found that areas of applications particularly IOS, was heavily researched with least focus on support and implementation (Rahim et al., 2011) The literature emphasizes the differences in activities that organizations have implemented on the Internet. However, it does not take explicit cognizance of the differences in the involvement of the different stakeholders in the Internet-based business. Companies aim to make large investments in their online businesses (DMA, 2013) and they vary considerably in

their use of EC. Hoekstra et al. (2015) suggest that website functions, both informational and transaction-related, influence a company's financial performance through their effects on website success and customer performance. Their study also confirms that website features make an impact on its success and the effects were generic, not pertaining to any industry. The study however did not distinguish between B2C and B2B websites. Yu et al. (2018) studied the adoption of EC in the luxury products business and how a quality label can lead to higher purchase intention and attitude towards a brand with low level of perceived risk. The study was focussed on B2C websites in particular. Several research studies between 2013-2018 has been carried out to study impact of EC on the luxury industry. There are few that have also focused on the impact of EC on the performance of organizations particularly SMEs (Iankova et al., 2018; Michael, 2014; Thitimajshima et al., 2018). There have been studies to ascertain factors that impact adoption of e-business in developing countries like Indonesia, Bangladesh, India, Malaysia and Iran which face different challenges compared to developed nations (Asghar and Stephen, 2013; Hoque et al., 2015; Janita and Chong, 2013; Masoumeh et al., 2018). Study by Janita and Chong is focused on B2B adoption and they also bring to light the fact that there is a lack of studies in B2B adoption particularly in emerging economies like Indonesia. SMEs in India, Malaysia and Iran have security & privacy concerns as the biggest barrier to ecommerce adoption. The other important factors were stated as lack of knowledge and understanding of e-commerce and running and maintenance being more costly than expected. The technology‐organization‐environment (TOE) framework provides a strong foundation for the study of B2B EC (Sila, 2013).

2.2. Website Characteristics

Certain design features of the website are known to influence use of the website and the attitude of users towards the website. Elling et al. (2012) focused on the measurement of government website quality with a specially designed website evaluation questionnaire. Important quality attributes being service quality, reliability, security, consistency, content quality, information quality, scalability, availability, accuracy of the information, relevance, completeness of data and perceived attractiveness of the website (Kang et al., 2016; Kim et al., 2017; Kuan et al., 2008; Lee and Kozar, 2012; Yang et al., 2005). Hoque's study is based on the extension of Technology Acceptance Model (TAM) and highlights factors like computer self-efficacy, perceived credibility, perceived usefulness and perceived ease of use having significant effect on ecommerce adoption. Davis (1989) defined perceived usefulness as the degree to which a person believes that using the particular system would enhance his/her job performance. Several studies have established the importance of website characteristics mentioned above (Galleta et al., 2004; Thitimajshima et al., 2018; Ting, 2018; Wakefield et al., 2011). Kim and Lee (2006) conducted a study to compare internet users from US and Korea in terms of their perception of website quality and how the dimensions of website quality influenced intention to purchase in a B2C scenario. Major drivers of B2B portal use and user retention are customization to develop long-term loyalty, flexibility of environment, with a bundle of information, products and services, and relevance of the content provided to the users (Sulin and Waynem, 2008).

2.3. User Characteristics

Website users may include individuals, corporate customers and vendors, along with the employees of the primary organization that implements the website. Chong et al. (2011) have attempted to build a critical success factors framework in the Chinese B2B marketplace. These factors are grouped as internal and external factors. Saade and Bahli (2005) for example, describe organizational preparedness and technology soundness as facilitators of website use. Studies on adoption and use of specific type of websites have discussed factors such as top management enthusiasm and support, relative advantage perceived from EC and knowledge of company employees about computers, allocation of resources and MIS staff support (Johnson, 2013; Tarafdar and Vaidya, 2006; Zain et al., 2005) in the context of online shopping). Chang et al. (2005) have reviewed the literature and have described consumer characteristics in terms of consumer shopping orientation, demographic variables, computer / internet knowledge and usage, consumer innovativeness and psychological variables as factors influencing use of the website. Variables like user age and IT competency have been shown to influence intention to use online banking websites (Lai and Li, 2005). In the case of B2B websites, organizational support to users in using the website and the importance of the concerned business for the user organization (Igbaria et al., 1995) also impact actual use of websites.

2.3.1. Perceived Trust in the Technology

This is one of the most heavily studied aspect in the field of EC. EC literature emphasizes the importance of users' trust as an important driver of website usage, particularly when there is exchange of private information between both parties (Chong et al., 2011; Hallikainen and Laukkanen, 2018; Thitimajshima et al., 2018). With the introduction of new shared technologies, it becomes more challenging to build trust proactively by the partner who is introducing the technology, and to ensure that the technology benefits both partners (Hart and Saunders, 1997; Johnson, 2013). User trust encompasses their trust in the Internet, trust in the concerned organization (Arun, 2013; Liu et al., 2005) and confidence in the website. Trust as an antecedent to perceived risks affects intention to transact online in the case of web retailers (Thitimajshima et al., 2018). Kim (2012) emphasized that trust formation is dynamic in a online shopping scenario and that trust has a lifecycle that has various stages and categories. Initial trust plays an important role in the beginning of a B2B relationship while ongoing trust helps in retaining that. Though most of the above mentioned studies have been in the case of B2C electronic commerce, trust plays an equally important role in the case of B2B EC (Qu et al., 2015). Alsaad et al. (2017) have revisted the role of trust in B2B EC settings and have suggested that trust has a moderating impact rather than a direct impact on the firm's intention to adopt B2B EC. Their study was set in Jordan. Gallivan and Depledge (2003) have shown that the use of IOS may leverage and reinforce trust. Factors like national culture, industry context, partnership types and the nature of the task to be performed or experts provided were found to impact manager's choice of trust and control in their partnerships. In some other studies, trust has been identified as a fundamental element for successful inter-organizational systems (Hart and Saunders, 1997; Johnson, 2013).

2.4. Organization Characteristics

A favorable attitude towards systems innovation and inclination towards new technology increases the adoption of EC technologies (Thi, 2011). Technology readiness, web presence readiness and E-Commerce readiness ability to acquire new skills and expertise plays an important role in determining the service quality and user satisfaction in the B2B context (Kang et al., 2013; Oliveira and Martin, 2010). Top management involvement and their orientation towards Internet commerce are the deciding factors in the successful implementation of Internet in the firm. Firms with managerial and IT competencies show a strong commitment to electronic business and website development.

A strong grasp of the expected outcomes, issues and requirement of electronic business facilitates successful adoption of electronic business. A few authors have reported the effect of various organizational parameters such as business size and centralization on the extent of electronic business adoption (Hart and Saunders, 1997). CEO characteristics (innovativeness and IS knowledge), customer loyalty, trust with regard to the integrity of the information and security of transactions conducted on the Internet, (Thong, 1999) are also influencing factors. Masoumeh et al. (2018) have used the lens of TOE framework to study B2B EC adoption in Iranian manufacturing organizations and have stressed on factors like Organizational culture, top management support and other technological factors.

2.4.1. Organization Structure

Various authors have commented on the effect of organization structure on technological innovations. Dewar and Dutton (1986) suggested that when an organization is decentralized it is more difficult for the top management to influence attitudes towards change than in a centralized structure. In a decentralized environment there might be greater opposition by powerful groups to bring about change. In a similar study, Zmud (1982) had observed that organizations not having a dominant coalition often experience difficulties with the adoption decisions. Centralization and formalization facilitate adoption as existence of a dominant coalition is likely. Organizational members at the operating level can be expected to play a more prominent role in adopting innovations in decentralized organizations, as compared to that in centralized organizations (Tarafdar and Vaidya, 2006; Zmud, 1982). Further, Daft (1978) has demonstrated that there are two types of technology innovation in organizations. One is initiated at the managerial level, centrally, and trickles down the hierarchy. The other is initiated at the technical and operating level and trickles up before the organization adopts it.

2.4.2. Organization Culture

Tarafdar and Vaidya (2006) in their review of the literature on factors influencing organizational inclination towards IT described top management characteristics like favorable attitude towards use of IT, awareness of IT potential in the business, aggression regards the role that IT should play in the organization, clarity of deliverables from IT, time and effort given to IT related resource planning and allocation and support to technology champions as being those responsible for a positive inclination towards IT use. The authors have also discussed several aspects of organizational culture that influence IT adoption in organizations. The role played by IT champions is important as they influence top management and articulate well the positive impacts of

IT on the firm's performance (Beath, 1991). They are powerful and aggressive and can bring about change and decrease resistance. IT champions are powerful and often aggressive, can overcome resource hurdles, work around bureaucratic barriers, reduce resistance and bring about change (Beath, 1991).

2.5. Power Balance

The theoretical model presented by Hart and Saunders (1997) described the role and use of power to persuade a trading partner to adopt EDI, also describes the role and use of trust in influencing the type of power exercised and role of trust in increasing EDI use. Power was defined as the capability of the firm to exert influence on another firm to act in a required manner. Power in buyer-supplier relationships is a function of dependence of one firm on the other, which can be buyer dependence based on size and composition of the supplier pool and supplier dependence based on percent of sales revenue from a particular buyer and the ability of the buyer to reselect another supplier (Emerson, 1962).

The following chart summarises the findings of the literature survey in terms of higher level factors and lower level constructs that impact inclination to use (ITU) a website.

Ⅲ. Research Methodology

The objective of this paper is to determine what organizational factors influence the inclination to use an IOS by both the PO and UO users, thus impacting the actual use of such systems, for example a B2B website. The case study method was found well suited to the study of this emerging and complex phenomenon and to understand, describe and explain the concept of IOS use. A distinguishing factor of this study is the use of PO-UO dyad as the unit of analysis. However, in accordance with prior work, the construct Inclination to use the website, is multi-level and therefore we have studied factors at the individual, group, organization and dyad level. The use of websites for B2B commerce is a complex organization phenomenon which involves individual business users, departments, the organization and the PO-UO dyad. Thus, there is a need to look at causal
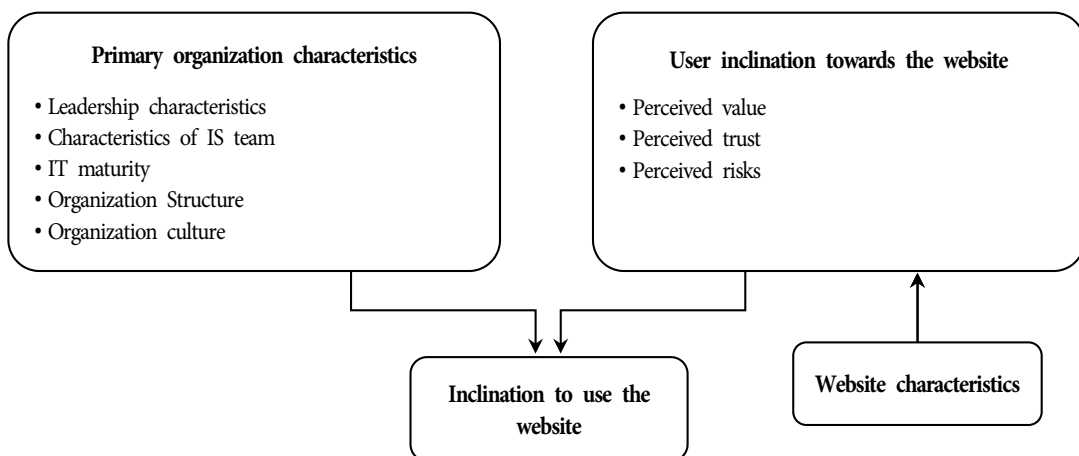
<Figure 1> Factors Impacting Inclination to Use Emerging from the Literature

variables at all the four levels. By level we mean the entities user, group, organization and dyad. Studies using dyads as the level of analysis are not uncommon. Kostova (1999) in his paper focused primarily on interorganizational dyads and not on individuals or organization while studying the transfer of knowledge within MNCs, with focus on transnational transfer of strategic organizational practices.

The construct Inclination to use a website has been developed in a stepwise manner. Each construct has been defined in terms of relevant lower level constructs. The identification of similar factors and classification into relevant constructs at each level has been justified by the existing literature as well as empirical data. The companies chosen for the exploratory study satisfied the following criteria:

1. Any organization (PO) with a B2B website in place for either its supplier or customer (organization specific website) and one of the user organization which uses the website
2. The website mainly concentrates on tasks related to information sharing, procurement or sales.

The four pairs of primary organization and user organization studied are coded as below:

The names of the PO and the UO have not been disclosed, though the essential information required to illustrate the concepts here, have been elaborated.

3.1. Instrument Development

The various sources of evidence that were used during the exploratory study were formal interviews, documentation, archival records – organizational charts, financial records, industry databases, secondary case studies relevant to the framework, websites, journal articles, magazine articles, newspapers, company reports and documents. There were four to five people interviewed in each organization. The length of each interview varied from 30 minutes to an hour. Both historical and current information was collected. The interviews were semi-structured, open-ended face-to-face interviews.

3.2. Data Collection

Qualitative data was used to explore the influence of organizational and behavioural factors on the in-

<Table 1> Details of the Organizations and Interviews

Code for the PO (for the purpose of this study)	Code for the UO (for the purpose of this study)	Industry of the PO	Interviewees (Senior management, CIO / IT Head, Middle management, Users/operators)	Total No. of Interviews (Approximate hours)
SMI	HRAIL	Steel Manufacturing	5 + 2	3+3
AVANTI	BI	Automotive component manufacturing	5 + 2	4+3
VIN	DE	Power & Utility	3 + 1	4+3
SBIKE	PD	Two-wheeler Manufacturing	3 + 2	3+3

clination of organizations to use a B2B website. An interview schedule was developed and used to collect information about the following:

- Specific characteristics of PO and UO and orientation towards B2B technologies.
- Website management mechanisms and specific characteristics of website that could influence use
- Behavioural factors like trust, motivation and additional factors that could possibly influence the attitude towards these applications and actual use of the websites.
- Organizational impacts of e-business adoption

The table below summarises how the study met the required guidelines of rigor.

3.3. Brief Description of the Dyads

A brief introduction to each of the dyads from India is provided below followed by a description of the organization characteristics, their leadership characteristics and drive towards use of IT and B2B applications.

3.3.1. Dyad1: SMI and HRAIL

SMI is a steel-making company in India and ranked amongst the top ten public sector units in terms

<Table 2> Establishing Research Rigour

Criterion	Guidelines	How guidelines were followed in this study
Internal validity	Pattern matching	The interview questions were guided by the findings from the literature, but we were open to emergent concepts from the exploratory study which helped us to iteratively match existing ideas with what we observed in the organizations. This matching between some of the existing concepts in the literature and the findings of exploratory study has contributed to the internal validity of the framework (Yin, 1989).
	Eliminating alternative explanations	Explanation building refers to the process of establishing causal links between independent variables and dependent variables. The two stages of literature survey and exploratory survey take care of building explanations and eliminating plausible rival explanations
Construct validity	Using multiple sources of evidence	Besides data from the interviews which was collected on the field, data was also collected from a number of secondary sources like, journal articles, magazine articles, newspapers, company reports and documents, industry databases, secondary cases etc.
	Establishing a chain of evidence	Established through creating a pattern of use of the website by the user organisation and the various factors which influence varying degrees of such use over time.
External validity	Scope for generalization of the study	This has been ensured by studying multiple cases in a qualitative research environment. This paper has analyzed four pairs of organizations from different industries and different organizational environments.
Reliability	Multiple Indicators	A particular construct may be manifested in more than one factor. Therefore use of multiple indicators not only ensures the consideration of important variables but also reemphasizes the presence of certain factors which influence the occurrence of the phenomenon.
	Data triangulation	Empirical data has been collected from more than one person in the organizations and departments studied using semi-structured case study protocol and open interviews (Yin, 1994). Also, other sources like organization records, websites and published reports have been used.

of turnover. It is a fully integrated steel plant, producing both basic and special steels for domestic construction, engineering, power, railway, automotive and defense industries and for sale in export markets. The organization has been divided into two functions, the production units together form one group and the sales & marketing offices form another group called the CMG (Central Marketing Group). The system used by the CMG was not integrated with the systems of the production units with each plant having a separate IT unit with its own set of IT applications. The company was steadily moving towards EC by adopting e-procurement & e-sales. This led to major changes to the IT applications portfolio including installing of an order management system which was the focus of our study. IS applications in SMI were planned on an ad-hoc basis and were mostly in response to employee requirements. The IT initiatives in SMI/CMG so have been focused at efficiency enhancement and process streamlining rather than at enabling achievements of strategic objectives. This website was the first step in opening up their IT network for information sharing and partnering with all the customers.

The senior level management at SMI were poor users of IT and there was a lack of planning for use of any such technology. SMI being a public sector unit (PSU) was hierarchical like most PSUs and to share data outside of the organization required multiple approvals. The top management did not focus on the details of new applications development, planning and usage. They were just informed about the progress on the implementation and use of the B2B website. However, they always encouraged employees to go ahead. Their requirement was restricted to the reports generated by the applications and not so much the technology bringing it all together. The top management's support for the B2B website came

after they were convinced of its benefits as put forth by the implementers. There were press releases organised to announce the adoption and release of the system and without top management support and encouragement it would not have gone through in a large organization like SMI. However, the top management could not play any role in providing directions and guidance towards use of such websites. The primary operating level staff was in the age group of 20 to 35 years and were mostly engineers or management graduates. The middle management layer was not technology savvy. The top management positions comprised of technology savvy people. Designing of IS was responsibility of middle level group of people.

SMI had also trained two people in the customer organization to support the end users. Inspite of this, HRAIL seemed more comfortable with prior methods and technology. Within SMI, regular training sessions were held by MIS department to increase employee awareness about current technological environment and benefits of the website in terms of improved decision making, better segment wise analysis, greater speed of order entry, faster flow of information across branch, regional and corporate office. But website remained stagnant with no improvements, enhancements or up-gradation done to it after the implementation team was dismantled.

SMI was reluctant to share data with all their customers at one go and hence they initiated it first for one of the key customers, HRAIL, which was also a government organization. SMI and HRAIL together worked during the website planning phase and arrived at a consensus on the requirements and website functionalities. SMI had to 'sell the website' to end users at HRAIL. Data security was a huge responsibility for SMI. IS team was responsive to user queries. There was no resistance from SMI em-

ployees to use the website as there was no other alternative.

HRAIL, a long time customer/buyer of SMI, is Asia's largest and the world's second largest rail network under a single management and has been the principal mode of transport in India for decades. HRAIL has well established B2C systems, the Internet based ticket reservation systems with all details about the trains and availability. B2B systems for e-procurement, were being implemented across the divisions independently.

SMI had to demonstrate the website functions and persuade users at HRAIL about the benefits they would receive, so that they use the website. Users at HRAIL felt traditional manual methods were easier for them to use. There was no coordination between SMI office and HRAIL for website support. There has been a reluctance & often resistance to use of Internet technology among the employees of HRAIL. The primary concern for SMI was that of non-awareness and non-cooperation on the part of the top management of HRAIL. The online order booking system has been provided only to HRAIL in the first phase, their most important customer and particularly for non-rail products. The top management at HR showed enthusiasm and promised to cooperate after some persuasion but it did not percolate downwards to the lower level employees. The use largely depended on the officer leading the procurement group at HRAIL.

It is a very old organization and has its own work culture which is difficult to change. The non-technological barriers were very high in the case of HRAIL. At the time of the initial launch of the website the senior officer in-charge of the procurement group at HRAIL was very much inclined towards IT and created awareness about the benefits of B2B systems. This led to increased motivation among users and

for 1-2 years the website was used as intended. The use discontinued when the officer in charge was re-located to another group.

The website did not provide any information about the dispatch and delivery from SMI. This was because these details were not known to the SMI employees themselves due to the non-integration of systems of plants and marketing offices. Some of the perceived benefits were time savings, critical information availability, reduction in paperwork, inventory control etc. The website though was not very user-friendly, was slow and remained unavailable most of the time. There was no online help available. The website was not easy to use and with poor maintenance, it did not appeal to the end users. Real time information and status from SMI plants was not available for HRAIL users when they needed. The end users at HRAIL felt the website was only marginally useful.

Employees of both the firms were not very well conversant with the website technology. The organizational hierarchy allowed easy and quick access to IT products to higher management compared to other levels in the organization. There are desk clerks at HRAIL office who were the intended users of the website. They were not very conversant with IT in general. SMI carried out intensive training sessions for these users with live demos. The end users at HRAIL continued to feel that traditional manual methods were easier for them to use.

All decisions regarding IT application was taken at the headquarters and then implemented at the level of the zones. The zones make their own purchases and implement programs within their financial limits.

3.3.2. Dyad 2: AVANTI and BI

AVANTI is one of India's leading manufacturer

of automotive components mainly air brake systems for commercial vehicles and die castings. ERP was implemented at Avanti in early 2000s across the different divisions in the organization. Prior to ERP and Internet technologies, MIS applications were fragmented across the various departments. The website was targeted to integrate all the various departments in the organization like, finance, quality, production, HR etc. and later to also include customer and suppliers.

After the successful implementation of the website, the CIO, who led the implementation project, made a strategic decision to standardise the IT base onto ERP across all group companies. He deployed the application across the remaining group companies and created an in-house ERP management team. The applications were run on an intelligent platform providing high levels of reliability, scalability, security. Avanti continued to invest in many other IT initiatives. The top level management believed that such IT initiatives were successful only when driven by a business need with expected benefits. Decision making was centralized.

The website was easy to use and the features were not very complex. The users were also comfortable with the Internet in general and hence raised no concerns while using the website. Users from the procurement group were also involved during the development of the website led by the head of the group to advise on required features that are needed to carry out tasks of the procurement group. There were education materials on inventory management, technical information, industry information etc. available on the website. The latest technology and business information were also published along with other business information for the community. The data security aspects were handled well. There were significant benefits accrued using the website like

reduction in lead time to service order, time spent on administrative jobs, service level improvements, real time availability of information for suppliers to name a few. Avanti was the implementing organization, costs were huge due to its integration with ERP and its complex infrastructure at the backend. But the benefits outweighed the costs. The majority of the costs were one time, and maintenance costs were not very high and did not show any increasing trend over the years that it had been used. The users showed greater degree of trust in the applications and the functioning of the IS department.

The employees in the organizations in general were inclined towards IT and were comfortable using computers with basic software for most of their tasks. The workmen with basic higher secondary education on the shop floor developed X-bar controls charts in soft copies and shared it over the intranet. The procurement group head was also aware of the emerging Internet technologies and ERP systems and was in favour of using emerging technologies for business benefits. Employees were encouraged to propose innovative ideas to improve performance and efficiency and they did find financial and management support if found convincing.

The CIO at Avanti possessed adequate business know-how and was technically skilled as well. He had a clear understanding of how IT works in organizations and what changes it can bring in an organization. He was seen to put himself in the customer and supplier position and attempted to analyse their requirements. IS team was competent and available to assist end users. They were experienced in IT development and maintenance work with a strong technical background.

BI is a small manufacturing unit that manufactures precision auto components started by three individuals who were the owner and managers. They

have been a supplier to Avanti for the last four decades and also to other group companies. BI is one of the many units loosely described as "informal" or "unorganised". BI has been using the latest IT applications with the support of Avanti and because of Avanti. Some basic packages were used internally within the firm like payroll and accounting packages. Being a very small manufacturing unit the level of IT use was not very high within the organization. The three owner managers were the leaders and took every decision for the unit and were also the end users of the website within their organization. Due to their association with Avanti, they were aware of the latest technologies but were not very conversant with sophisticated features particularly involving financial transactions. They used the B2B website as made available by Avanti for their day-to-day activities.

The weekly scheduling information is available to them on Avanti's website. BI view what it has to supply and plan the production accordingly. The website was beneficial for managing their inventory and they could focus on other activities like product delivery of all the products instead of one. The website complemented their Kanban way of work. BI realised several benefits like time savings, greater transparency, timely payments, real-time information availability. The investment from them was only a computer with Internet connection. The website was very user friendly and user feedback was well taken by Avanti IS team. The CIO and group managers at Avanti have even personally met end users and managers of BI when the website was being launched. Avanti has ensured that authorized people only can access the information on the website. Though inter-firm trust is high, trust on Internet technology in general was not very high among users in BI. But with adequate training and education by Avanti

these issues were sorted out eventually. Average age of the organization was approximately 35 years. During the initial phase BI found it challenging to use the website, it was slow and there were problems in users understanding the various features. Avanti's IS team interacted with the end users every 10 days to understand the concerns and take actions if required.

There was no IS function in the organization as BI did not use any sophisticated IT systems of their own.

3.3.3. Dyad 3: VIN and DE

VIN is a private sector power utility company generating and distributing power in one of India's largest city and its environs having a licensed area of 567 sq. km. serving 11 million population. The IS department when formed was a 9 member team and started with the LAN implementation within VIN. IT applications were fragmented across the organization with each department having their own IT team, developed their own customized applications and worked in silos. Later one centralised team and centralised applications was built. The website was developed with both B2B and B2C features. This was developed internally on freeware (Linux). There was no financial support provided by the organization leadership for the development and maintenance of the website. There was very less penetration of Internet technology in the day-to-day business activities until then.

The top management's orientation towards B2C Internet commerce and customer relationshio management had been changing over last couple of years. In contrast, their orientation towards B2B Internet commerce was different. The website was implemented with the motive to impress the senior

groups. The top management recognized that IT and Internet commerce in particular was becoming crucial for companies but lacked awareness on what was required and how to initiate the exercise and how to leverage these technologies for their organization's benefit. Decision making in the organization was centralized.

The CIO was observed to lack basic understanding of the Internet technology, EC and its application in the organization and misled the top management with promises of benefits. The website design was not well planned. The purchase department had no prior exposure to computers and their involvement in the design and development was minimal. They supported the adoption of a B2B website just because everybody else had it.

Due to lack of awareness and knowledge of the Internet technology and ways to mitigate risks, the level of trust in the technology was low. Users were reluctant to share information over such a medium. A small team was set up to provide support to end users but later they moved to other roles. The IT staff were not cooperative and proactively did not conduct any user training sessions. End users wanted the website to be made interactive. They continued to use alternate channels to carry out the tasks as they did not see any value in the website.

One of the major concerns for VIN was the employee union. Since EC reduces the workload on many people and some times even the number of resources, there was resistance from the union. The CIO who initiated the implemented had left the organization. The new CIO hailed from an IT background, but lacked a business background and came with limited business knowledge. He did not encourage use of existing systems, nor took efforts to bring about changes in the organization's IT landscape. There was no group which took complete ownership

of the website and its maintenance.

The IT team had developed the vendor management system but the application was not given due attention and user enthusiasm towards the application diminished in some time. There was no feedback received from end users after its initial use. The IT team was not proactive to interact with users and ask for feedback and their opinion. They lacked strong technical background.

DE is a trading unit for low and high tension electrical products. They procure items from reputed sources and supply to companies like VIN. The company is a small firm with a total strength of 12 employees with a turnover of Rs. 3.5 crores. They have been supplying material to VIN for the last 30 years and have had a long business relationship with VIN. There is use of standard accounting and payroll software by the employees of DE. Internet is being used primarily for email purposes to email the tender and quotations to customers. The company per se does not have a website of its own. For day to day operations, computers are being used for calculations and information storage.

DE was a small family owned business. The owner was inclined to use IT even in the absence of apparent need to use IT for their own business operations. All decisions related to the organization and IT use, were taken by him. But he was not very much aware of B2B Internet commerce technologies. He only used the website of other customers to support the inter-organizational activities and was enthusiastic about trying new technologies for conducting business. They were prepared to use their customer website if asked to, as long as training concerns were handled by VIN. This was one requirement from DE side as their employees and users were not comfortable with the Internet yet.

There were no IS professionals in the company,

and all decisions regarding IT was taken by the owner manager.

VIN had approached DE for electronic tendering, but it did not materialize as there were open issues at VIN's end. DE has the basic infrastructure to get started with using customer's website. They send quotations to buyers through email. Not all organizations involved in the supply chain are well versed with Internet commerce technologies. DE also saw several benefits in using the website with minimal costs incurred to purchase computers and Internet connection. VIN provided the necessary training to DE.

3.3.4. Dyad 4: SBIKE and PD

SBIKE manufactures motorcycles, scooters, mopeds, and scooterettes, and maintains a huge customer base of more than five million people.. SBIKE relies on JIT practices. ERP and SAP are being used in the organization since 2000. The B2B website was later deployed and linked to SAP systems at the backend. Till then, each department had their own information systems that catered to their individual information processing requirementsThe company implemented ERP across the group companies and also implemented the B2B website to interact with their customers and suppliers instead of emails. SBIKE had developed a website as part of the customer relationship management (CRM) initiative for their dealers to use. Using this website the dealers could manage their own activities like sales execution, post-service, spare parts management etc. SBIKE has the available data on customer profiles for analysis, market research, planning activities and development of new products with changing customer tastes. The benefits were clearly visible to everyone in terms of time and cost savings.

SBIKE was headed by senior management who

were proactive in adoption of IT systems for business purpose and performance enhancement. They along with the CIO were fully involved and committed to the project. Decision making was centralized. The project took off with a pilot study with 5 dealers. The top management provided for the financial and human resources required for carrying out implementation of such complex systems. The use of the website has been made mandatory for all dealers. All dealer related activities like order-booking, claiming warranty, billing, delivery, and credit status were done using the website. This has motivated dealers to use the system as the response time has been enhanced. There is major reduction of inventory carrying cost and better planning of services.

The marketing group leadership is well aware of use of Internet technologies for carrying out inter-organizational processes. They are able to give concrete directions and guide the implementation team. They were personally involved in the website implementation and development of features that catered to requirements of their group. They made sure adequate resources were available to the implementing team and appropriate feedback was given on time. The leaders also motivated the users of their department to use the website.

SBIKE team arranged for proper training sessions for the users at PD. Every month SBIKE officials extracted a report on user's usage data and it was analyzed. They try to find out which session/link was used most. Thus they try to optimize that particular operation and improve upon it. SBIKE promised to resolve users problems with the website and thus generated interest among the end users. Many cross-functional teams were put in place for short durations to address specific issues that concerned departments across the company.

The CIO of SBIKE who led the entire im-

plementation project possessed adequate business know-how and IT knowledge and was well aware of emerging technologies. IS professionals were competent and ready to assist whenever help was required by end users. PD was the authorized dealer for SBIKE, primarily for customers in one of the cities in south India. PD is the dealer in mopeds, scooterette and bikes. PD started computerization in their company in 1994. The company uses standard software packages for payroll and accounting purpose. PD did not have any IT/systems department as such. They had basic computer facility and Internet connection. PD is small dealer with the SBIKE and the owner takes all decisions in the organization. He is the leader and is not very aware of Internet commerce as such. They were introduced to such technologies by SBIKE and had no prior exposure to such systems.

PD is informed about the warehouse details now, unlike earlier. They have real-time information from the SBIKE plants. SBIKE earlier did not provide dispatch and delivery information earlier. Especially for certain high demand vehicles, PD needs to know when it will be delivered. Prior to use of the website, orders were placed through the telephone, and communication gaps existed. Now there is transparency. It has also reduced the chances of committing mistakes in writing the order details. Earlier sometimes wrong products used to be delivered. The communication costs have reduced as well.

After SBIKE dispatches the products they pass on the information to PD. The dealers get to know the day-to-day balance amount this is a major benefit to them. PD have been associated with SBIKE for over 15 years. They have shared good relationship over the years. PD has around 110- 120 employees.

Only one person uses the website on a regular basis in the firm. He/she places the order as well. The remaining employees do not place orders. The spare parts department has 2 people only. All were trained by SBIKE particularly for uploading the order details on the website, but otherwise were not well conversant with IT and other technologies. The website underwent few changes based on user feedback initially. Currently there are no issues related to the website. The age of the employees varies from 20 yrs to 43 years. IT was not used extensively in the organization for their internal tasks.

Ⅳ. Data analysis and results

The notes based on the field data collected from the eight organizations and other sources were transcribed. Few factors have already emerged from the literature and were confirmed by our findings as well. In addition to these we found other factors and possible explanation of their influence. Labels or codes were thematically attached to different segments of the qualitative data which explained each variable or higher-level construct using manual coding methods. This was an iterative process and with each additional case site, transcripts were matched to existing codes and new codes were created to depict additional variables and constructs. Thus a process of pattern matching evolved (Yin, 1989). Further, explanations were developed for the relationships between the different labels or codes for each interview and contradictions were explained when necessary. This is the process of explanation building (Yin, 1989). A hierarchical structure was also established, either by the interviewee themselves or during the analysis, thus giving rise to the higher level construct and lower level variables. There was no software used for coding and analysis as the intention was not to quantitatively establish the dimensions of the framework but rather to demonstrate and explain

what factors influenced the inclination to use a website and why.

We present a sample table of codes and associated dimensions in the tables below. The quotations listed in Table 3 and 4 below relate to Dyad 3 - VIN and DE.

<Table 3> Quotes, Themes and Dimensions for VIN (PO)

Codes	Dimension of Inclination to use the website by PO	VIN (PO) Quotes from different data sources
Organizational preparedness	Organization leadership orientation	• There was no department with the ownership and responsibility for the website and its content. The system had to be robust. • Not much effort was spent to motivate users within own organization.
Top management support	Organization leadership orientation	• There was no top management support and hence budget & funding was a constraint. • Internet was looked upon as a necessary hype – top bosses wanted to use the Internet because they wanted the company to have a good reputation in the market
IS/IT planning	Inclination of IS professionals	• The website was just setup to impress senior management in the organization. • It was not put to use after the initial phase as at that point the company realized they were not going to gain much by its use. Users' opinion was not very much appreciated and hardly asked for after the website was deployed.
Support for Users	Inclination of IS professionals	• A training programme was conducted on e-procurement. • IT Team was not proactive enough. They waited for the users to approach them for issues regarding the website. • There seems to have been some political undercurrents as the CIO had personal reasons in not pursuing what his predecessor has initiated.
User attitude within the department	Inclination of IS professionals	• No specific feedback was received from anyone after the website was put in place.Internally there seemed to be lack of coordination and interaction.
Organizational IT maturity	Organization leadership orientation	• Entire IT infrastructure was well setup. • Management supported the building of a B2B website because 'everybody' had it. • Executives were eager to learn a new technology and increase productivity. But the organization needs to be careful with the employees and the union.
Control mechanisms	Inclination of IS professionals	• There were no significant control mechanisms in place.
Power and control in the relationship	Dominance	• The power lies in the hands of the users, but they were not motivating the organization to adopt e-business technologies
Organization culture	User Inclination	• A certain power imbalance between the employees and groups was observed • No IT oriented line of thought. They had a strong unionised culture and divisional organization structure
IS Structure and leadership	Inclination of IS professionals	• There is absence of a concrete IS structure. There is no major IS leadership position available. There are a few staff who form the IS department and use the computers. • CIO was not from the line of business. There was no integrated, centralized IT structure. There was no ownership and there seemed to be some ambiguity about the roles and responsibilities regarding development and maintenance of such systems.
Trust in technology	User Inclination	• Few people in some of the departments had very little idea about Internet commerce. Since awareness was low, trust in the technology also seemed quite low.

<Table 4> Quotes, Themes and Dimensions for DE (UO)

Code	Dimension of Inclination to use the website by UO	DE (UO) Quotes from different data sources
Top management orientation towards Internet commerce	Organization leadership orientation	• The senior management felt that it was too soon to decide for a website of their own. They had implicitly decided that if other customers ask them or provide them with the feedback about a website, they will then initiate the process for creating and updating a website. The owner-manager was positively inclined towards IT.
Alternative channels	User inclination	• There was no need to access the Internet as there were alternative channels which were equally convenient for users. Vendor locations were very close and it was easy for them to visit VIN or call them rather than to login to the Internet and do it.
Individual user characteristics	User Inclination	• The employees were not very comfortable with the Internet right now as they were not using any online systems.
Competitive use of the Internet within the organization	Organization leadership orientation	• There was no website for the organization. • Use of IT was restricted to few activities only. • They were open to using customer websites provided they were given the training and support.
Resistance to change	User Inclination	• There was no significant resistance to change. The top managers believed that employees would adopt new methods if required.
Relationship with the primary organization	Dominance	• The company had an excellent relationship with VIN so far. They have been supplying to them for last 25 years.
Support mechanism in UO	Inclination of IS profession	• The employees depended on training from VIN. The basic infrastructure requirement of a computer and Internet connection was available. They also required post implementation support from the PO.
IS Structure and leadership	Inclination of IS profession	• There is absence of a concrete IS structure. There is also no major IS leadership position available. There are a few staff who form part of the IS department and use the computers.
Perceived Risks	User Inclination	• It was felt that there is always an element of risk in adopting such technologies. Other than the general risks, no particular risk was perceived with this website

In the discussion that follows we use examples largely from PO. However, similar factors can also be observed in the UO.

Ⅴ. Discussion and implications

5.1. Discussion of Findings

The construct we have studied in this paper is System Inclination (SI) to use the website, a combination of Inclination to use the website by the primary organization (ITUPO) and Inclination to use the website by the user organization (ITUUO). We describe here the individual inclinations and describe how this is reflected in the resultant variable of SI to use the website. The Inclination to use the website by the primary organization is influenced by the following aspects:

a. Organization Leadership Orientation Towards B2B EC (OL)

b. Users' Inclination To Use The Website (UI)

c. Inclination of IS Professionals (ISP)

These have been discussed in depth for both the PO and the UO, further in this section.

5.1.1. Inclination to Use the Website by the Primary Organization (ITUPO)

The PO's inclination towards the website is influenced by many lower level variables that contribute to use of the website in a particular way. The PO hosting the website faces the risk of resistance on the part of its own employees and functions to use the website. We examine the lower level variables influencing ITUPO in detail in the following sections.

Organizational Leadership orientation towards B2B electronic commerce (OL)

A positive orientation of the leaders and top managers in an organization towards IT, steers the company towards greater use of IT. This also helps the other members of the organization to develop a positive attitude towards using IT and newer technologies like Internet commerce. Leadership also determines organization's approach towards change management. Organization leaders' orientation towards IT in general and IOS and EC in particular, can create a facilitating and supportive environment for the users of the PO. It was observed in the organizations studied, that organizations where leadership's interests were not clearly visible or their involvement and interest appeared to decline towards EC and new IT initiatives, users' perception was also not positive. OL can have values – High / Low. The following are the characteristics of organizational leaders that impact orientation towards B2B EC:

1. Top management's support and commitment are very crucial in driving use. Top management's orientation towards such technologies influences the users' attitude towards using the system. Senior managers carry a much greater credibility with users than any other group does and can thus articulate convincingly the benefits of using the website and allay any fears the users might have regarding job losses, loss of power etc.

2. It was observed that leaders who kept themselves abreast of the changing technological landscape also inspired other leaders and managers to do the same. It was found in the cases studied that the leaders who were inclined favorably towards EC deployment, encourage and actively support and participate in implementation of new technologies for various functions, in terms of acquiring the necessary infrastructure and training potential users of the system. This often motivates other members in the organization to come forward and participate.

3. Organization leaders' trust in electronic business technologies is essential for promoting use of such applications in the organization. Lower levels of trust can create similar perceptions in the minds of other users and groups in the organization. It was observed in AVANTI and SBIKE, that the top management personally ensured that adequate resources in terms of money and human resources were made available for the adoption and use of new technologies. This built up the enthusiasm among user departments. SMI and VIN though had senior managers using IT to the bare minimum, they often approved projects driven by user groups if convinced about the benefits.

Users' Inclination to Use the Website (UI)

The individual users' natural disposition towards IT also contributes to inclination to use IT. The members comprise opinion leaders, end users from various departments and otherwise politically powerful people. Internet often brings with it several changes in processes. Hence if an organization is not open to IT in general, it may not favor use of the Internet to a great extent. The users refered to here are the members of the department or group in the PO, which is required to use the website. This factor reflects the natural drive towards Internet commerce by members involved in the inter-organizational process. UI can have values – High / Low. UI is determined by the following factors:

1. An analysis of the combined effects of perceived usefulness, perceived costs, perceived risks and level of trust in the website along with the ease of use of the website features, describes the perceived value of the system. This is achieved when there exists a fit between user needs and the website features. Users should intuitively feel that using the system is beneficial. Perceived costs of the system could be in terms of monetary figures or could be in terms of the time and effort spent in using the website compared to using alternative media. If actual costs keep increasing compared to the benefits, its use may discontinue. The website features also impact perceived costs. Users end up wasting more time and effort using poorly designed websites and confusing features and alternative media begin to seem more appropriate. This was observed in SMI. Further, if the website is complex for the PO, they might have greater difficulty convincing the UO and the end-users at UO to use the website and its features. There are

a few examples of cases from the cases like HRAIL, DE where users complained of poor website maintenance, slow speed of the website and complex features. The users were less inclined to use the website. Perceived trust can be low if the internal users feel that the organization has not taken adequate care of potential problems that pose various risks for them.

2. User involvement during website development increases the possibility that the user group would be inclined towards use of the website. Such involvement includes providing feedback, suggesting necessary features and identifying gaps in user needs and features provided. User participation reduces the probability that the final website will have features not useful and unnecessary. The group managers responsible need to recognize and appreciate the potential of B2B e-commerce in improving business processes.

Inclination of IS Professionals (ISP)

Inclination of IS professionals refers to the technical competence, the business understanding and the overall orientation of IS staff towards IT. This also includes the IS leadership orientation towards IT in the organization. A positive inclination reflects IS professionals who are updated on new technology, inclined towards greater investments in IT, continuously upgrade and update the applications in the organization. A negative inclination reflects less competent IS professionals who are not keen to encourage organizational IT investments and do not upgrade or maintain the different applications in the organization. ISP can have values – High / Low. The following factors determine the value of ISP:

1. The IS leadership should be capable of influenc-

ing the top management and other senior executives of the organization and should complement the CEO's know-how of the technology and its practical use in business. The IS department's orientation towards Internet commerce, the power it wields and its relationship with the leadership and the users in the organization, influence inclination to use the website.

2. The IT department which is positioned at a high level within the organization can be expected to be able to exercise greater influence on both the organizational leadership and the users, with respect to use of the website. This they can do by virtue of the greater authority and resources that would be there at their disposal. If the department is distanced from the end users, then there is greater possibility that conflict exists within the PO itself. If the IS/IT department is decentralized across the different user departments, the organizational distance between the IT department and the users is likely to reduce. This is expected to result in better user support by IT department and greater potential influence of the IT department on the users and therefore inclination to use.

There are other factors apart from OL, UI and ISP which indirectly influence the Inclination to use. They are discussed below.

Organizational IT Maturity

Organizational IT maturity is defined as the amount of time that the organization has been exposed to IT and its various applications and the degree of involvement with their planning, implementation and use. Organizations with a high degree of IT maturity are more likely to adapt to changing technologies, having gone through the vari-

ous phases of adoption of IT. In organizations with high IT maturity, key business executives in the organization as well as the CIO have a clear financial understanding of IT costs and potential investments and discuss IT in a common language. High IT maturity was observed in AVANTI and SBIKE. On the other hand, we observed that in VIN organizational IT maturity was relatively low.

Importance of the Degree of Centralization

The nature and extent of the influence of OL and UI on inclination to use depends on the organization structure. It was observed that, in centralized organizations, the orientation of the OL is the predominant factor in determining the inclination to use the website. On the other hand, in decentralized organizations, the orientation of the users (UI) is the primary determinant of inclination to use. Even if the top management lacks a positive attitude, in decentralized organizations the orientation of the organization members towards Internet and IT, results in greater inclination to use. The influence of IS professionals on the organizational leadership and Users' inclination to use the website is moderated by the relationship between IS professionals and organization leaders and IS professionals and Users respectively. We examine this in detail below.

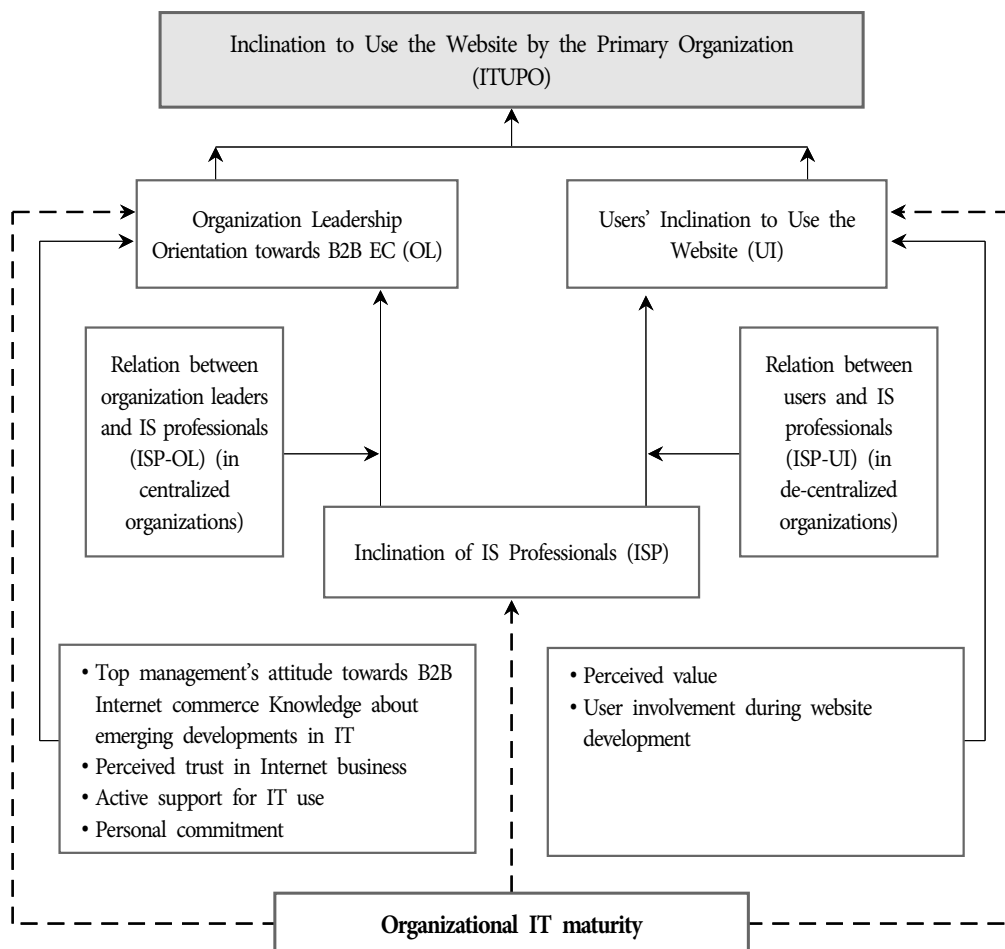### Relationship between ISP and Organization Leadership (ISP-OL)

ISP can influence the orientation of the organization leaders to a considerable extent depending on the relation between ISP and OL. Top management often are influenced by the IS leaders in the organization such as the CIO or IT head. This relationship can be reinforcing or constraining. It is said to be *reinforcing* when ISP has a strong influence on OL and hence is able to convince them for im-

plementation of appropriate technologies. The IS professionals also actively participate and collaborate with OL to plan IS deployment, frame policies and acquire and manage the infrastructure. Organizations with such relation exhibit greater interaction between ISP and OL. The relationship is said to be *constraining* when there is absence of this reinforcing effect between ISP and OL. In centralized organizations, the orientation of the OL is the dominant factor influencing the overall organizational inclination. Therefore, the ability of ISP to influence the OL assumes a much more significant proportion in centralized

organizations. ISP's positive orientation can over time change the negatively oriented OL to a positively oriented group, provided the relationship between the IT function and organization leadership (ISP-OL) is reinforcing.

Relationship between ISP and Users' Inclination (ISP-UI)

ISP can also influence the orientation of other members of the organization, like user departments, opinion leaders and other powerful people, contingent upon the relation between ISP and these

<Figure 2> Inclination to Use the Website By The PO

groups. This relationship is said to be *reinforcing* when ISP has a strong influence on the organization members and thereby gains their support for use of recent technologies. The IS professionals provide active end user services in terms of training and ongoing support for acquisition and use of IT. Organizations with a reinforcing relationship be-

tween ISP and users exhibit greater interaction between ISP and these user departments. The relationship is said to be *constraining* when there is absence of this reinforcing effect between ISP and UI. In decentralized organizations, the orientation of the UI is the dominant factor influencing the overall organizational inclination. Therefore, the ability of

<Table 5> States of ITUPO

OL (H/L)	UI (H/L)	ISP (H/L)	ITUPO (H/L)	Explanation and Examples
High	High	High	C – High	**A.** In a centralized organization, a positive leadership orientation (OL) implies that ITU is high. In these firms, OL influences the ITU. (AVANTI, SBIKE)
			DC- High	**B.** In a decentralized organization, where users have high inclination towards the website, ITU is high. In these firms impact of UI assumes greater dominance as the power lies with the users.
High	High	Low	C- High	Same as **A** above
			DC – High	Same as **B** above
High	Low	High	C – High	Same as **A** above
			DC – Low	In a decentralized organization, where users have low inclination towards the website, ITU is low. In these firms UI usually has a more significant impact. But over time, UI could change to high and ITU could change to 'high' if ISP-UI is reinforcing.
High	Low	Low	C – High	Same as **A** above
			DC – Low	In a decentralized organization, where users have low inclination towards the website, ITU is low. In these firms UI has a significant impact on ITU.
Low	High	High	C – Low	In a centralized organization, a negative leadership orientation (OL) implies that ITU is Low. But over time, OL could change to high and ITU could change to high if ISP-OL is reinforcing.
			DC – High	Same as **B** above
Low	High	Low	C – Low	In a centralized organization, a negative leadership orientation (OL) results in low ITU.
			DC – High	Same as **B** above
Low	Low	High	C – Low	In a centralized organization, a negative leadership orientation (OL) signifies a low ITU. But given time, OL and ITU could change to high if ISP-OL is reinforcing.
			DC – Low	In a decentralized organization, where users have low inclination towards the website, ITU is low. In these firms UI has a significant impact on ITU. But over time, UI and ITU could change to high if ISP-UI is reinforcing.
Low	Low	Low	C – Low	ITU is low as overall there is low inclination towards use of the website. (VIN, SMI)
			DC – Low	ITU is low as overall there is low inclination towards use of the website.

ISP to influence the UI is more significant in decentralized organizations. A positively oriented ISP can influence non-users to be positively oriented provided the relationship between the IT department and user groups (ISP-UI) is reinforcing.

A summary of the construct inclination to use the website by primary organization is presented in <Figure 2>.

The different states of ITUPO have been described in the following table for both C- Centralized organization and DC- decentralized organization. In a centralized organization, OL assumes greater dominance whereas in decentralized organizations, UI is the dominant factor.

5.1.2. Inclination to Use the Website by the User Organization (ITUUO)

The user organization, being the key user of the website, also needs to be positively inclined towards the website that would lead to continued use. As discussed in the beginning of this section, the inclination to use the website by the primary organization cannot alone determine website use. Inclination to use the website by the UO also is a key factor for website use. The user organization's inclination towards the website is influenced by many lower level variables mostly similar to what was observed in the case of the PO.

The characteristics of organizational leaders that impact users' orientation towards Internet commerce has been discussed in the case of PO in the previous sections and holds true for the UO as well. The other sub-constructs have been discussed at length earlier from the perspective of the PO. It is conceptually similar when studied from the point of view of the UO. Website characteristics assume greater importance in the case of UO users. In addition,

compatibility between the systems at PO and UO also acts as a facilitator. If currently any ERP is being used in the UO, there may be an effort to integrate the UO's ERP systems and the website. This is often not possible as these are two different systems. The states of ITUUO are similar to those of ITUPO. The ITUUO was Low in the case of all the 4 UOs (BI- Low, DE- Low, PD- Low, HRAIL-Low).

5.1.3. Determining System Inclination to Use the Website (SI)

Dominance

It was observed during the exploratory study that if only one of the firms between the PO and UO experiences a greater inclination to use the website, the role of dominance becomes an important factor in determining the 'system inclination to use the website'. The PO and UO users together form the 'system of users'. To summarise the above factors, we can say that the dominant partner in buyer-supplier dyad shows the following characteristics:

- Powerful top management and influential IT head
- Significantly larger organization
- Strong reputation and a strong influencing position in the market
- Aggressive adopters of technology

Any of the following situations can arise with respect to the combined inclination of the dyad to use the website. System inclination (SI) can have values High or Low.

Our study made several important findings. The first is that System Inclination to use a B2B website is the combined effect of the inclination to use the website by the PO and the UO resulting from the
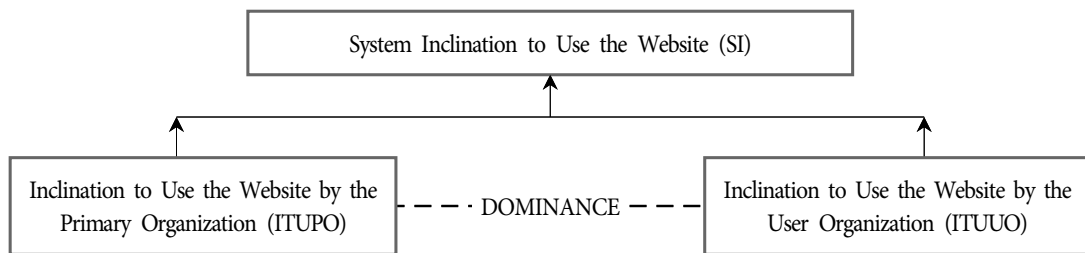
<Table 6> Definition of States – System Inclination

ITUPO	ITUUO	Dominant firm	SI	Description	Examples from case studies
High	High		**High**	Both organization having a High inclination towards EC and inclination to use the website would have High inclination overall.	
High	Low	PO	**High**	If the dominant firm is positively inclined to use the website it would motivate the negatively oriented partner firm.	SBIKE -PO PD – UO SBIKE characteristics: -Powerful and influential leadership -large organization compared to its dealers -market reputation as successful adopters of IT AVANTI- PO BI-UO AVANTI characteristics: -Supplier availability -large organization -aggressive and powerful top management -reputed as successful adopters of IT -high degree of integration between Avanti and BI
		UO	**Low**	If the dominant firm is negatively oriented towards the website, it would not change its stance even if there are pressures from the weaker partner.	
Low	High	PO	**Low**	Same as above	
		UO	**High**	If the dominant firm is positively inclined to use the website, it would motivate the negatively oriented or indifferent partner firm to change their orientation.	
Low	Low		**Low**	Both organizations are negatively inclined to use the website and therefore, the overall system inclination is low.	SMI -PO HRAIL- UO VIN-PO DE- UO

partner dominance in the buyer-supplier relationship. The factors discussed above can influence some of the needs of the weak partner organization by virtue of its power. Dominance plays an important role in determining the combined inclination of the dyad.

This is shown in the <Figure 3> below.

The next important finding from our study are the various factors that influence the Inclination to use and the nature of influence of each of these

<Figure 3> System Inclination to Use the Website

factors. The inclination at the group level reflects at the organization level which further translates into inclination at the buyer-supplier dyad level. The construct System Inclination to use the website (SI) is defined as the drive experienced by the system of users to use it for the intended purpose and objectives. It is important to consider inclination of both the UO and PO to use the website as it influences nature of use significantly.

5.2. Limitations and Future Research Directions

Despite the significant findings of this study, our results should be interpreted in the context of its limitations. One of the limitations being that the data sample has been small. Given the exploratory nature of the study a small data sample helped to focus on the minute details of the PO and UO and the various user groups. However, studies are required to strengthen the findings further in the context of different kinds of dyadic relationships as well as extending it to other information sharing platforms. Other dyadic forms such as the firm-investor, firm-employee, firm-government, etc. could have also been explored. Another limitation is that there has been no differentiation between the industries to which the firms belong, keeping in mind the nature of the study. The lower-level and high-

er-level constructs are kept generic rather than industry-specific. This offers a future research opportunity as well. While it is possible to compare and analyze the experiences of a single UO with multiple POs, or single PO with multiple UOs, we had not been able to do so in this study. Such an exercise would have made the findings more generalizable.

5.3. Implications for Research and Practice

Practicing managers can derive certain lessons from this paper. The causal factors developed in the framework including the facilitating and inhibiting factors help managers assess and evaluate their organizational readiness for website use. Managers can thus use the framework to assess e-readiness for inter-organization website use. The importance of the dominance factor has also been highlighted. Managers need to take into account such dominance issues between PO and UO before assessing e-readiness. Further, managers can focus on technology related and organization related mechanisms which can be used at the pre-implementation, implementation and post-implementation phases of website implementation to influence use.

This paper has important implications for researchers working in the area of B2B EC and emerging technologies appropriate for inter-organizational information systems. The unique features of the

Internet pose numerous opportunities for organizations and use the technology, individually, in groups and at the organizational level. There is hence a need to fill the gaps in understanding of such a phenomenon.

While an attempt has been made to develop a conceptual framework for understanding Inclination to use a B2B website by organizational dyads, there is ample scope for extending this piece of research into related phenomena. The constructs developed in this paper can be used to compare B2B situations among close knit supplier-firm networks such as in the automobile, textile or petrochemical industry. Various constructs and variables developed in the study can be further operationalized as measures and hypotheses developed for further testing. This will also increase the generalizability of the proposed model for SI.

Ⅵ. Conclusion

The primary contribution of this research study has been in the form of a comprehensive framework to understand Inclination to use a B2B website by developing an understanding of factors that facilitate and inhibit inclination to use. Past research has shown that studies on use of the B2B website, particularly in Indian organizations that use website for coordination and interaction with buyers and suppliers, had not yielded any comprehensive conceptual framework that explained the use of such websites. System Inclination is the combined effect of the inclination to use the website by the PO and the UO dyad. The model developed serves as a line of research for understanding the role of organizational factors, IS professionals and inter-organizational relationships in influencing SI.

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◆ About the Authors ◆

Merlin Nandy

Managing Consultant, Senior Solution Manager at IBM India Private Ltd. She is a Fellow of Indian Institute of Management, Calcutta (Ph.D.) in the area of Management Information Systems. Her research focuses on the use of different Internet based technologies by end users and organizations, and the factors that impact such use. She is a Certified Solution Consultant in SAP CRM Telesales and a Certified Scrum Master (CSM). She is primarily engaged in a presales consultant role with focus on Electronic business, ERP applications and Intelligent Automation. She has published in various information systems conference proceedings including AMCIS, HICSS, ICEB and journals including JOCEC and JCIT.