

The role of information technology adoption in the globalization of business buying behavior: a conceptual model and research propositions

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Abstract

Purpose – Advances in information technology (IT) and the globalization of business are both realities and opportunities of the twenty-first century. This article aims to examine the role of information technology in the globalization of business buying behavior.

Design/methodology/approach – Literature and theory are used to develop a conceptual model of adoption of information technology (IT) and globalization of business buying behavior. Firm-level and global moderating factors are also examined.

Findings – IT adoption includes IT adoption by buyer and by seller and the compatibility of both IT systems. Globalizations of buying behavior is moderated by firm-level factors like perceived risk, digitizability and by task and global moderating factors like availability of alternative suppliers in buyer country, cultural distance and the political stability in the supplier country.

Research limitations/implications – The paper provides a number of propositions that can be tested empirically, and also extensions for training and skills for business buyers.

Practical implications – The correct choice of IT systems for compatibility with buyers and sellers can mitigate the negative effects of moderating factors.

Originality/value – The paper sets out the impact of IT adoption by buyer and seller firms and its impact on globalization of business buying behavior in the twenty-first century.

Keywords Communication technologies, Globalization, Purchasing

Paper type Conceptual paper

An executive summary for managers can be found at the end of this article.

Introduction

There is a strong consensus among scholars and practitioners that developments in information technology (IT) will affect several aspects of marketing in significant ways (Sheth *et al.*, 2000; Oliva, 1999; Kalakota *et al.*, 1999). In particular, the role of information technology in influencing buying behavior has been well recognized (Widing and Talarzyk, 1993; Hoque and Lohse, 1999). Although IT affects both business-to-consumer marketing and business-to-business marketing, its effects on consumer buying and business buying behaviors are qualitatively and quantitatively different (Kotler, 2000; Kaplan and Sawhney, 2000). A central concern in marketing, organizational buying behavior has been an important domain of scholarly investigation for a long time (Robinson *et al.*, 1967; Webster and Wind, 1972; Sheth, 1973; Johnston and Lewin, 1996; Dawes *et al.*, 1998). With

the advent of technological changes and e-commerce over the course of the last decade, the role of information technology in business-to-business markets has become crucial. We believe that conceptualizations of business buying behavior in the context of technology have not kept pace with their perceived importance to academics and managers. While academics have increasingly studied supply chains, given the increased possibility of information sharing through IT and the internet (Power, 2005; Roy *et al.*, 2004; Sivakumar and Roy, 2004; Zahay and Handfield, 2004), there is a dearth of findings about the new phenomena of the globalization of suppliers. Global business has primarily been studied from a market expansion perspective, as in the international business literature. Trade barriers, the difficulty of communication, logistics, and travel had hitherto not encouraged the global sourcing of business or industrial products. Therefore, there is an urgent need for a better understanding of the globalization of business buying behavior.

The goal of this article is to address this significant gap in the literature by focusing on the role of technology in the globalization of business buying behavior. Given the momentous changes in the business-to-business marketplace, this paper will attempt to theoretically examine changes in organizational buying behavior due to technology

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adoption in business processes by the buyer and seller in business markets.

We argue that a wide range of information technology adoption exists within the business processes of organizations. At one extreme, businesses such as Dell Computers have adopted web-enabled, real-time supply chain management. At the other end is a small computer assembler in Australia that literally pieces together inexpensive machines by hunting for the cheapest parts in various markets. The latter does use e-mail and computers, but also physically coordinates supplies and relies on the telephone a great deal. Our article examines this range of technology adoption in business processes and considers its impact on the globalization of business buying. We also consider other contextual factors that moderate the impact of IT adoption on globalization of suppliers.

By offering a new conceptual framework to study the role of IT in the globalization of business buying, we advance three related fields of scholarly inquiry: the business buying behavior stream, the technology stream, and the globalization stream. Such research is also useful for firms; once they have a better idea of how technology affects business buying, they will be able to arrive at better mechanisms for enhancing their performance.

The rest of the article is organized as follows. The second section introduces the conceptual model and provides a description of the variables we examine in this research. The third section develops a number of research propositions by means of a literature review that spans such areas as consumer behavior, economics, organization behavior, technology adoption, international business, and so on. The fourth section offers future research directions and delineates the managerial implications of our work.

Conceptual framework

Information technology and business marketing

In its traditional sense, business-to-business marketing encompasses the transactions between adjacent members of a firm's value network in which goods and services are purchased for onward sale or are converted for further supply. Business-to-business markets differ from business-to-consumer markets in the following ways:

- goods and services are not purchased for personal consumption;
- the buyer and seller tend to have a specific technical capability fit and make mutually asset-specific investments;
- webs of "relationship" elements tend to hold the buyer and seller together; and
- buyers and sellers tend to have their own professional networks.

The business-to-business internet market can be divided into two categories:

- 1 the type of individualized transactions (e.g. electronic data interchange, or EDI, as described in Kalakota *et al.*, 1999); and
- 2 e-hubs, or the internet version of the traditional wholesale market, in which smaller buyers purchase goods and services (as described in Kaplan and Sawhney, 2000).

To better understand the business-to-business internet marketing phenomenon, we bring together insights from traditional business marketing theory and the knowledge-

based view of the firm. We integrate these two knowledge domains by incorporating interaction and network theory in the context of the web-enabled information age of the twenty-first century.

Driving these changes from a conceptual viewpoint are changes in the nature of the firm itself. Traditional views of the firm have centered on the notion that the firm exists to appropriate value more effectively. Thus, in the traditional sense, the means of production (e.g. land, labor, and capital) can be effectively managed through the organization of the firm; the firm achieves profit by improving the efficiency of the production function. Regarding interactions outside the firm, transaction cost theory (Coase, 1937; Williamson, 1975) predicts that human beings (particularly those not controlled by the same firm) may become opportunistic and self-seeking in totally free market conditions. To overcome this "self-seeking with guile" (Parkhe, 1993), free markets become "domesticated" (Arndt, 1979) and markets fail as relationships take over (Dwyer *et al.*, 1987). Within long-term relationships, business markets tend to become stable, and the production function continues as in the traditional case of land, labor, and capital.

In contrast to the notion of the firm as a "value appropriation entity," the knowledge-based view of the firm (KBVF) considers the firm to be a "value creating entity." KBVF maintains that the firm is a repository of knowledge and know-how, and uses both market and non-market mechanisms to invoke, synthesize, expand, and deploy firm-specific knowledge in the global marketplace (Kogut and Zander, 1996; Nahapiet and Ghoshal, 1998; Nonaka and Takeuchi, 1995; Spender, 1996). KBVF maintains "that a firm be understood as a social community specializing in the speed and efficiency in the creation and speed of transfer of knowledge" (Kogut and Zander, 1996, p. 506).

Network theorists of the industrial/international marketing project (IMP) school (Hakansson, 1982; Hakansson and Snehota, 1995) have dealt with the theory of firms interacting with each other to create knowledge communities in an industrial age context. These researchers maintain that organizations interact by means of actors, resources, and bonds.

The internet has radically changed the ways in which human networks operate and has given enormous power to business-to-business markets. Specifically, we maintain that the internet has altered how actors, resources, and bonds operate. In an intra-firm context, enterprise resource planning (ERP) systems have revolutionized the traditional "value-appropriating" function of the firm. For example, the human resource (HR) module of the SAP-ERP system can instantly produce the leave balance of an employee (labor) and link up this data to the financial data in case the leave is encashable. The Federal Express package-tracking system (Kalakota and Whinston, 1999) contains up-to-the-minute information on all FedEx deliveries; employees feed information into hand-held computers.

It is, however, the internet that is revolutionizing the ways in which interactions take place, particularly in the business-to-business context. Quite simply, opportunism is likely to become increasingly rare (as all data is on record) and, as attitudes regarding information become more relaxed, relationships will become key (e.g. Dell Computers and its suppliers). To examine the impact of technology adoption on business buying behavior, we begin by reviewing traditional models of business-to-business markets and propose certain

changes against the backdrop of KBVF and interaction theory.

The proposed model

Although a discussion of the comprehensive effect of technology on business behavior is too large a project to tackle in the context of a single article, we try to provide a parsimonious but meaningful framework to address the key aspects of the impact of technology. Borrowing from the key findings and frameworks of the existing literature, our proposed conceptual framework is presented in Figure 1. Figure 1 proposes that the globalization of business buying behavior is influenced by the adoption of technology by the buyer and seller. However, the framework also proposes that this impact is not the same across all situations, but rather is contingent upon a number of factors.

Elements of the model

IT adoption in business processes

In this article, we define IT adoption in business processes as a continuum on which the position of every organization or industry can be visualized. IT includes business processes related to information technology or communication technology, including decision-making (including purchasing decisions; e.g. Roy, 2003). For instance, IT adoption would include having an organizational intranet, having enterprise resource planning (ERP) systems installed, using e-mail for external communications, having an EDI, video-conferencing with suppliers, and so on. Our definition of technology adoption makes it possible for us to measure a range of adoption possibilities among buyers and sellers. We propose that IT adoption in business markets consists of three elements:

- 1 buyers' adoption of IT;
- 2 sellers' adoption of IT; and
- 3 the platform constituting the buyer and seller IT interaction.

For example, if the buyer's and seller's technologies are highly compatible and well integrated, they will fall at the higher end of the adoption scale than two firms whose IT systems are less compatible.

Globalization of buying behavior

The globalization of buying behavior refers to organizations that are open to suppliers from outside the local country. Such organizations are willing to consider foreign suppliers for the goods and services required for their business. Globalization of buying behavior could be highly global, in which almost all the requirements of a particular category of goods and services are sourced from abroad, or it can be not global at all, with all services and goods being procured from within the home country, as well as various other intermediate possibilities.

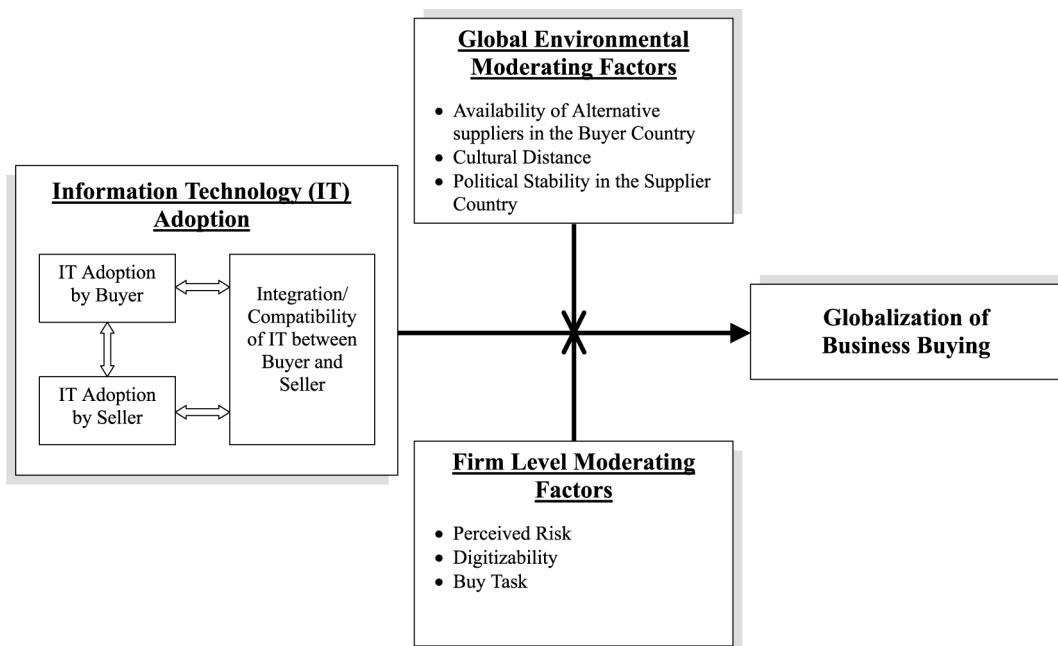
Moderating variables

Our central thesis is that the more a firm adopts IT, the more it should be willing to globalize its supplier base. However, two sets of moderator variables will dictate how much IT adoption will impact globalization. These variables will be considered in terms of two sets of moderators:

- 1 firm-level factors; and
- 2 global-environmental variables.

The first set, firm-level factors, classically have been considered important in business buying behavior (e.g. Webster and Wind, 1972; Sheth, 1973; Johnston and Lewin, 1996). These include the buy task and product characteristics. In addition, to incorporate the possibilities offered by technology, we include the "digitizability" of the product as a moderating variable. The second set of moderator variables is external to the firm; these include the availability of viable local suppliers, cultural distance, and geopolitical stability.

Figure 1 A model of the role of information technology in globalization of business buying



Development of research propositions

Globalization

As the Cold War recedes from view, consumer markets grow more global every day (Cavusgil and Zhou, 1994). Brands like Coca-Cola, McDonald's, and Microsoft are just as popular across the world as they are in the USA. In business markets, much of the world's manufacturers and suppliers are located in low-cost countries (e.g. Nike in Thailand and Sony in China). Since 1995, the internet has further enabled coordination between overseas suppliers of services and goods and their buyers.

In fact, the costs of coordinating international suppliers are being vastly reduced for buyers, while sellers are now able to search and sustain global business buyers. The internet "level[s] the playing field between large and small suppliers" (Kotler, 2000, p. 201) in business markets. While in the pre-internet era, EDI (electronic data interchange) worked in favor of big suppliers who could set up similar IT platforms for big buyers, the equation has been significantly altered by the growth of the internet. It costs \$50,000 to add a single trading partner in an EDI system; by contrast, a supplier can be added to the GE Trading Process Network for as little as \$1,000 (Kotler, 2000).

P1. The greater the adoption of IT, the greater the globalization of suppliers.

Firm-level moderators

Perceived risk

Inventory, reordering, Economic Order Quantity, and ABC analysis have been traditional methods of underwriting risk in purchasing (Bingham and Gomes, 2001). Under this traditional approach, about a third of organizations have their warehouses and stores report to purchasing management (National Association of Purchasing Management, 1992).

Risk in industrial buying is endemic in all but the most routine, repeat purchase of "C"-class items – those that can be handed over to employees (as at Microsoft) to purchase online from approved vendors. C-class items may be large in number yet small in value. For the purchasing department, A- and B-class items require careful management. If these items are not available or fail to perform, the main business of the organization may be affected. Thus, in the parlance of inventory management, it is typically the A- and B-class items that involve higher risk. For items in the high-risk category where established specifications and suppliers exist, risk perception may lessen somewhat; however, it may never be as low as the risk of routine, low-value, non-critical items, such as plain stationery used by a manufacturing company.

The JIT system (O'Neal, 1989; Freeland, 1991; Gilbert *et al.*, 1994), on the other hand, attempts to reduce inventory in order to reduce costs. JIT systems must identify fail-safe suppliers so that all items can be depended upon. A reduction in the supplier base and a close relationship with suppliers are frequent characteristics of JIT purchasing management.

In general, we may consider a traditional purchasing policy as a low-risk approach, while the JIT buying policy may be considered high risk. We will examine how the risk continuum moderates the impact of IT adoption on buying behavior.

For high-value equipment or systems, such as grain-handling silos in China, global tenders might ask for international bids. The tender calls would be posted on the internet; up until the supplier's qualifying stage, we may consider this situation to be low risk. Before the supplies are

actually finalized, it would be necessary for the buyer and seller to interact, via personal meetings, faxes, letters, and/or phone calls, before the dealing is brought back to an electronic mode.

P2. Perceived risk moderates the role of IT adoption on globalization: the higher the perceived risk, the weaker the effect of IT adoption on globalization.

Digitizability

Stages of economic growth are important for both buying and selling activity in global markets (Cateora, 1990). While most buyers are situated in highly developed countries, a country with low levels of industrial development may still be a buyer (McGuinness and Little, 1981). Mobile telephone systems, for example, do not require the physical infrastructure of conventional telephone lines, and therefore will be appealing to buyers in countries with low economic development.

In the global virtual world, physical distribution will continue to be a constraint. For this reason, all business products that can be digitized and that do not require physical delivery will be amenable to immediate globalization. For example, software, engineering drawings, or medical transcriptions that can be delivered via the internet will be the easiest products to globalize in business markets. In fact, all products and services that can be reconfigured into digital and non-digital components will be, and entirely new global sourcing methods will be attempted. For example, call centers are being outsourced to cheaper Asian locations for the servicing of US consumers.

P3. The ability to digitalize products and services moderates the effect of IT adoption on globalization: the higher the ability to digitalize, the stronger the effect of IT on globalization.

Buy task

The buy-task grid (Robinson *et al.*, 1967) separates business purchases into three categories according to task. The first, "new task buying", are first-time purchases of business products. Such purchases represent a major opportunity for marketers, as new task purchases may eventually become routine purchases. New task purchasing requires the greatest degree of effort from the buyer and seller as they try to establish a supply to meet the new needs in the organization.

The second category, the straight re-buy, or repeat purchase, lies at the opposite extreme from the new task buy. The straight re-buy typically makes up the majority of organizational buying, and is thus standardized and routinized for day-to-day contacts. Between the straight re-buy and the new task buy is the modified re-buy. This third category involves an improvement and changed specifications for a product that has reached a routine re-buy status. A modified re-buy can frequently involve initiatives by new suppliers who, by creating a "new" demand, hope to find continuing business with a buyer (Bingham and Gomes, 2001).

While the internet allows for instant global communication (a book can be ordered and paid for at Amazon.com from anywhere in the world), elaborate inventory and delivery systems are still needed to deliver the physical product (Seybold, 1998). In global business markets, transportation, customs clearances, and inland freight are frequently uncontrollable. Without a well-oiled logistics system in operation, no buyer would like to depend on an international supplier for functionally critical products.

The small order problem (Lambert *et al.*, 1990) is concerned with C-class items, which constitute 80 percent of the work of purchasing but involve less than 20 percent of the value. As the internet is used for routine product orders, we may see a shift in purchasing from traditional supplier to online stores. Thus, online stationery suppliers such as Office Max and Staples should become important, particularly for the smaller buyer (Strout, 1999). MS Market is an internally developed system used by Microsoft to enable all employees to buy small-value items immediately from the internet (Kalakota and Robinson, 1999). The purchasing department develops supplier lists and approved prices; once an employee places an order, it is routed to his or her manager for more information, while payment is arranged through the finance department automatically. Thus, gaining access through the company intranet, an employee can buy a \$20 book from Barnes and Noble based on an approved price list (example from Kalakota and Robinson, 1999). The ordering process is decentralized and empowers employees to directly purchase supplies while cutting down on paperwork. While big buyers like Microsoft may be able to negotiate special prices with online suppliers, the smaller buyers are likely to shift to portals that offer reliable delivery.

For processing equipment such as photocopiers, issues such as supplier service and product reliability will continue to dominate buying behavior. Similarly, for strategic organizational equipment purchases that are undertaken infrequently, purchasing will not change, though some communications may be via e-mail. Thus, non-routine and strategic items would come to the attention of executives. The supplier selection criteria are unlikely to be formalized for all categories of these infrequently purchased equipment. Such equipment would qualify for the creation of what Dawes *et al.* (1998) call “emergent buying centers”, in which supplier selection is an evolving process not amenable to direct business process analysis at a generic level.

On the other hand, for new task or modified re-buy, the possibility of global sourcing becomes possible. E-mail interactions and detailed specifications can be exchanged over the internet far more rapidly than ever before. Initial trial supplies of raw materials, components, or equipment can be delivered fairly rapidly while logistical issues are identified and streamlined.

P4. The nature of the buy task moderates the effect of IT adoption on globalization: the effect of IT on globalization will be the strongest for straight re-buys, followed by modified re-buys, and will be the weakest for new tasks.

Global environmental moderators

Availability of suppliers in the buyer country

Due to reduced global trade barriers, better price-quality competitiveness has become the primary reason for business buyers to import goods (Ghymn *et al.*, 1999). Should a product of comparable price and quality be available in the home country, industrial buyers would always prefer to buy locally, given the ease of logistics, delivery, and after-sales service. In fact, global suppliers are focusing on reducing transportation time to compete with local suppliers (Cortright, 2001).

Thus, technology adoption in the buyer- and global seller relationship will provide the impetus for globalization only when local suppliers become unviable. However, one crucial change brought about by the internet is the ability of buyers to

continuously search, evaluate, and communicate with prospective global suppliers. In other words, procurement software allows buyer firms to continuously evaluate and track global supplier offerings (Kauffman and Mohtadi, 2004). The only deterrent to the adoption of technology and commencement of a technology-aided relationship is the availability of a comparable local supplier.

P5. Availability of local suppliers moderates the role of IT adoption on globalization: the availability of comparable local suppliers will lower the effect of IT adoption on globalization.

Cultural distance

“Cultural distance”, which refers to differences between country cultures, has become a construct of enduring interest in international business (Shenkar, 2001). The primary focus of the construct has been in trying to understand the internationalization process of firms (Johanson and Vahlne, 1977) and foreign market entry. Hofstede’s culture dimensions (Hofstede, 1980) have been formulated into an index (Kogut and Singh, 1988) and have been used to measure cultural distance and to predict choice of entry mode (Ekeledo and Sivakumar, 1998). Using a similar logic for the market entry by global suppliers, we predict that cultural similarity will moderate the link between IT adoption and the globalization of suppliers, other factors such as price and quality being equal. In other words, IT adoption in the globalization of business buying will increase when buyer and seller are culturally similar. When competing global suppliers from different cultures have identical offerings, IT adoption within the relationship will increase with cultures that are similar to the buying-country culture.

P6. Cultural distance moderates the role of IT adoption on globalization: the lower the cultural distance, the higher the effect of IT adoption on globalization.

Political stability

Political stability refers to the stability in the supplier country. High political stability includes stable government policies regarding export and foreign direct investment irrespective of the party in power. For example, a change in party or regime frequently alters export or investment policy (e.g. Roy and Wilkinson, 2004). In developing countries in Africa, export is seriously hampered by instability (Gyimah-Brempong, 1991). In turbulent times, even when IT links exist, it may be too difficult to source material from politically unstable countries. For example, recent global terrorism makes both international marketing and international purchasing more difficult. Even if a country is politically stable internally, terrorism may destabilize the business environment. Businesses may not be able to make purchases, foreign direct investment may become difficult on the supply side, and the sourcing of goods and services may become uncertain on the demand side (Czinkota and Knight, 2005). With strong buyer-seller relationships sustained by IT, spare inventories might mitigate the risk of sudden terrorist acts. Political stability could be a starting point for commencing business.

P7. Political stability moderates the role of IT adoption on globalization: the higher the political stability in the supplier country, the higher the effect of IT adoption on globalization.

Discussion

Managerial implications

IT has already affected business-buying behavior significantly, and this influence will only grow. By offering a conceptual model of the contingent effect of several variables on the impact of IT on the globalization of business buying, we have offered some basic elements of a managerial decision framework to guide managers. Our framework implies that it is not only the extent of IT adoption that governs globalization in business buying behavior, but the compatibility and integration of IT between buyer and seller. This is especially true if the relationship between buyer and seller is a long-lasting one.

This research offers several insights for companies that are deciding on strategies for IT introduction as well as making adjustments in their purchase processes and personnel. Our framework examines the key effects of IT and moderating variables. Further empirical research must be conducted to demonstrate which aspects of the buying process are influenced most by IT and which moderating variables have the greatest effect in defining the role of IT. Companies must realize that in the final analysis, it is the combination of people and IT that will give them a superior competitive advantage – especially in the knowledge-based economy of the twenty-first century.

Another aspect of organizational buying that must be considered by firms is the changing nature of the skill set that is needed to succeed in business buying. In addition to the clear need for technical expertise, the personnel recruited must have qualitatively different skills to succeed in this new, information-rich environment. Conceptual frameworks such as this one, as well as empirical verification of the same, will offer organizations important insights about personnel selection, training, and reward mechanisms.

Research implications

We believe that our research opens up several avenues for further research. Clearly, the first opportunity is to verify empirically the propositions developed in this article. Note that the research design involves both between-firm variables and within-firm variables. An important outcome of such empirical research would be to attain an idea of the comparative impact of the moderating variables and IT on the business buying processes.

In the interest of parsimony, we focused only on what we believe to be the key business process elements and key moderating variables. Further research must focus on other variables that may become important in the context of the changing economy. Also, it might be interesting to investigate industry effects such as:

- Are some industries affected by IT more than others?
- Are the business processes affected by IT different across different industries?

These research questions are becoming increasingly important for companies striving to be profitable in the long run.

To achieve a focused conceptualization, we did not differentiate among the impacts of buyer adoption of IT, seller adoption of IT, and the interface between buyer and seller. While each of these elements will affect the buying process, future research must examine the synergistic and counteractive efforts of these three components. For example, under what circumstances can a low level of IT adoption at the buyer organization be overcome by extremely good IT at the seller organization, and *vice versa*? Are there situations in

which the compatibility of IT between buyer and seller will be more important than individual IT adoption levels? Answers to these questions will have significant implications for how organizations relate to one another.

In a similar vein, it is also important to identify the negative effects of IT on business buying or the performance of a firm. For example, will there be a tendency to rely on too much information in a situation that may only call for limited use of information? Are there situations in which increasing participation will be at odds with speedy decision-making (e.g. in routine decisions)? Future research must focus on these and similar interesting and important questions.

Conclusion

Our conceptual model is based on the premise that the changes wrought by the new knowledge-based economy and the dramatic effect of IT on business-to-business markets make it important to re-examine the business process in general and business buying behavior in particular. We specifically examined the role of IT in influencing the globalization of business buying behavior and the mediating influence of several contextual factors. Both business buyers and sellers would benefit by understanding the impact that IT will have on various aspects of business buying behavior.

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Executive summary and implications for managers and executives

This summary has been provided to allow managers and executives a rapid appreciation of the content of the article. Those with a particular interest in the topic covered may then read the article in toto to take advantage of the more comprehensive description of the research undertaken and its results to get the full benefit of the material present.

To say that information technology has already affected business-buying behavior significantly and that this influence will only grow isn't such a surprising statement these days. Depending on your definition of "significantly", it may even sound trite, and a huge understatement.

Before we had all the computer-related gizmos we rely on so heavily these days, who could have imagined dumping a local supplier because you could find someone to supply more cheaply in another country? Who could have imagined the convenience and speed of talking business on a mobile telephone, or following up with requirements and specifications by e-mail? What buyer could have imagined being able to instantly compare prices of the local suppliers with companies offering similar products and services across the globe?

Who could have imagined software that would work out in seconds financial data that company clerks would have struggled over for days? Or how that software could be compatible with supplier companies' systems, not just in your own country but almost anywhere in the world? Who could have imagined that, while waiting for a delivery of goods from another continent, its position and progress could be tracked at the touch of a computer key?

All this, of course, we take for granted as we shall take for granted all the other technological marvels that come our way in the future. Although the infrastructure of a global technological network is now a reality, and growing, to what extent IT will make business buying truly "global" will, however, depend on many influences and conditions. Examining changes in organizational buying behavior due to the adoption of technology by buyers and sellers in business markets, Subroto Roy and K. Sivakumar say: "It is not only the extent of IT adoption that governs globalization in business buying behavior, but the compatibility and integration of IT between buyer and seller. This is especially true if the relationship between buyer and seller is a long-lasting one".

Another aspect of organizational buying they say must be considered by firms is the changing nature of the skill set that is needed to succeed in business buying. In addition to the clear need for technical expertise, the personnel recruited must have qualitatively different skills to succeed in this new, information-rich environment.

The costs of coordinating international suppliers are being vastly reduced for buyers, while sellers are now able to search and sustain global business buyers. While in the pre-internet era, electronic data interchange worked in favor of big suppliers who could set up similar IT platforms for big buyers, the playing field has become much more level. Consequently, the greater the adoption of IT, the greater the globalization of suppliers.

Perceived risk is a moderating factor in the role of IT adoption on globalization. Although risk in industrial buying is endemic in all but the most routine repeat purchases of "C" class items, safeguards can be put in place for "riskier" projects. If you are buying grain silos from China, for instance, the initial tendering process might have been done via the internet. But before supplies are finalized, it would be necessary for buyer and seller to interact via personal meetings, faxes, letters, and/or phone calls, before the dealing is brought back to an electronic mode.

In the global virtual world where physical distribution will continue to be a constraint, the ability to digitalize products and services strengthens the ability to "go global" – hence the outsourcing of call centers to countries where labor is cheaper.

The nature of the buy task also moderates the effect of IT adoption on globalization, the effect being the strongest for straight repurchase, followed by modified re-buys, and the weakest for new tasks. For new task or modified re-buys, the possibility of global sourcing becomes possible. E-mail interactions and detailed specifications can be exchanged over the internet far more rapidly than ever before. Initial trial supplies of raw materials, components, or equipment can be delivered fairly rapidly while logistical issues are identified and streamlined.

The availability of local suppliers is also a moderating factor, yet global suppliers are focusing on reducing transportation time to compete with local suppliers. However, one crucial change brought about by the internet, to the detriment of local suppliers, is the ability of buyers to continuously search, evaluate and communicate with prospective global suppliers.

The differences between country cultures is a further factor in moderating the role of IT adoption on globalization with business buying likely to increase when buyer and seller are culturally similar. Also having its effect is the political stability in the supplier country, with political stability being a starting point for commencing business.

Companies must realize that in the final analysis, it is the combination of people and IT that will give them a superior competitive advantage – especially in the knowledge-based economy of the twenty-first century.

(A précis of the article "The role of information technology adoption in the globalization of business buying behavior: a conceptual model and research propositions". Supplied by Marketing Consultants for Emerald.)