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Electronic Business (EB) in the Context of Global Sourcing: A Proposed Framework

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Abstract

Global sourcing operates under the challenges and pressures of intensive global-wide competition. Global sourcing can benefit from the functionality of electronic business (EB) by exhibiting more flexible structures and added opportunities in communications and transactions with partners among worldwide supply chains/networks. This study aims to answer two research questions, “what are the relationships between global sourcing and EB?” and “how do EB applications and strategies help global sourcing lead to better performance?”

Our literature review addresses the relationships between global sourcing and EB from three perspectives: the applied theories, the covered business scope, and the changing roles of flows. In analyzing the potential benefits of EB to global sourcing, the enhancement on SC components and alignment effects are discussed. Finally, a framework is proposed to highlight how EB and global sourcing interact with each other, resulting in five major issues: the enhancement of SC components, the changing micro-environment, the effect of accelerating evolution of global sourcing, the integration of activities, and the significant improvement on outcomes.

1. Introduction

Global supply chain management (GSCM) is regarded as one of today’s key business trends. Global sourcing can benefit from the functionality of electronic business (EB) by exhibiting more flexible structures and added opportunities in communications and transactions with partners among worldwide supply chains/networks. This study aims to answer two research questions, “what are the relationships between global sourcing and EB?” and “how do EB applications and strategies help global sourcing lead to better performance?”

The paper is organized along an extensive literature review section, the primary focus of which emphasizes foundations of global sourcing, key issues of EB, and the concept of alignment. Subsequently, a framework is developed in which the relationships between EB and global sourcing are analyzed, followed by conclusions.

2. Literature Review

2.1 Global Sourcing

2.1.1. Definitions of global sourcing

Because of the types, as well as the scope of global sourcing, the literature offers various definitions of global sourcing. Some definitions are mainly based upon specific features of a particular industry [39]; some are based upon corporate goals [12]; while still others are based on the specific format of sourcing activities [37]. In addition, there exists a clarification battle between international sourcing and global sourcing [26] [5] [1] [35]. However, in order to cover broader evolution stages and all possible types of global sourcing, this study adopts a broader definition of global sourcing, taken from Murray, Kotabe & Wildt [30]: “(*global sourcing*) involves setting up production operations in different countries to serve various markets, or buying and assembling components, parts or finished products worldwide.”

2.1.2. Key determinants of global sourcing

Five key issues in global sourcing are identified in the literature: financial issues, strategic issues, structural issues, culture issues, and evolution and classification issues. Each of these is discussed in turn.

➤ *Financial issues*

In the context of global sourcing, financial issues are the ones most often mentioned in the literature. Issues such as production cost, transfer pricing, exchange rate, and switching cost abound. For instance, Kouvelis [17] provides an in-depth analysis of how to make global sourcing an operational hedging mechanism to respond to fluctuating exchange rates. The main theme of Kouvelis’ evaluation model is to compare the tradeoff between switching cost and exchange rate fluctuation for a certain period, so as to help a corporation make orders to suppliers based on total cost minimization. Lowe, Wendell & Hu [21] take a similar perspective. By utilizing the value of historical data and scenario-based mechanisms, a two-phased approach is proposed to look into the tradeoff between switching cost and exchange rate fluctuation.

Transfer pricing is another important tax issue multinationals face [34]. Based on the setting of four

“vectors” (i.e., material flows, transfer prices, profit and loss, and proportions of transportation cost allocation), Vidal & Goetschalckx [41] establish a mathematical model for maximizing net income after tax of a global SC.

The studies mentioned above lack the support of empirical evidence or real cases. More and more studies hold the opinion that “financial factors are important to global sourcing while the financial-deterministic perspective is doubtful.” Examples can be found in [19] [32].

From a theoretical perspective, financial issues still hold. Theories being cited include transaction cost theory, opportunity theory, resource based theory, macroeconomic theory, and contingent claim theory [28] [17] [29] [11].

➤ *Strategic issues*

Strategic issues, in comparison with financial issues, cover a relatively wider scope. It at least includes issues of design, product maturity, the level of global sourcing, and relationship management, which are all cited as critical success factors of global sourcing.

Based on optimal control theory, Mallick & Mukhopadhyay [22] propose that different goals of corporations lead to different requirements on supply chain design patterns, and the determinants of “global versus local” design include: product variety, product life cycle, and sales response to design decisions.

When focusing on relationship management, Samli, Browning & Busbia [37] provide a good reference for examining the relationship between global sourcing and corporate strategies. In this study, the authors not only validate the correlation between the intensity of international sourcing and a “strategic versus opportunistic” dichotomy, but also suggest that global sourcing should be regarded as a strategic tool rather than a goal of a strategy. Sheth & Sharma [38] hold similar opinions, which suggests that global sourcing is expected to be a strategic advantage and a key driver. Moreover, Bozarth et.al. [5] explore the relationships between sourcing decisions, sourcing strategies, and prior supplier performance. They conclude that global sourcing in early stages will tend to adopt the strategies of multiple sourcing and formal contractual relationships, while those in more mature stages of global sourcing will tend to focus on partnership or supplier relationship.

Overall, in contrast to the prediction by transaction cost analysis, studies that highlight the importance of strategic issues on global sourcing postulate that the adoption of intensive strategic alliance-based global sourcing for components will be the key for success, which is in line with Murray’s [29] propositions.

➤ *Structural issues*

In order to find the optimal structure for the global sourcing organization, two dimensions are highlighted [1]: the level of internationalization, and the level of centralization. Arnold suggests that the global sourcing organization model should take three types of fit into

consideration: intra-strategy fit, intra-structure fit, and structure-strategy fit. Further, when determining the degree or level of internationalization and centralization, both should be measured by company-layer and procurement-layer. By analyzing nine cases, three ideal types for the global sourcing organization were identified: central purchasing model, coordination model, and outsourcing model.

When flexibility is taken into consideration, Kouvelis [17] concludes that either having a flexible contract or adding more suppliers to the global sourcing structure will help solve the fluctuating exchange rate problems, at least in the short run.

In addition to the traditional structural change of global sourcing, a new business unit named international procurement office (IPO) is introduced [12], providing more autonomy and flexibility for companies, and regarded as another way of structural change or adjustment for the fit of global sourcing.

Kotabe, Murray and their colleagues did a series of research on the theme of global sourcing. From these studies, global sourcing activities can be categorized into eight types, based on three dichotomy dimensions: inter-firm (outsourcing) versus intra-firm, domestic versus foreign (abroad), and component versus assembly. This classification framework indeed helps to highlight the possible alternative structures of global sourced oriented companies, and then further identifies the interactions between structure and global sourcing behaviors [30] [31] [28].

Finally, Petersen, Frayer & Scamell [35] suggest, based on empirical study, that sourcing structure and processes, and sourcing capacity, are regarded as the keys for achieving effective global sourcing.

➤ *Cultural issues*

Culture plays an important role in explaining why organizations react and operate differently. The most well-known examples in the field of global sourcing are those comparing US firms and Japanese firms, such as [16] [11]. Furthermore, more and more studies argue the generalizability of the findings made by the US-based survey, because of the consideration of culture difference [12] [36].

When extending the global activities of a SC upstream and downstream, Etlie & Sethuraman [11] found that culture will result in different patterns of global sourcing. For instance, Japanese corporations tend to more adopt a local supply source.

Hult [14] focuses on the sustainable competitive advantages of global sourcing. Hult finds that culture factors indeed affect the long term success of global sourcing for US companies. However, surprisingly, these cultural factors do not necessary impact performance independently.

Kotabe [16] compares the patterns of US companies and Japanese companies. Kotabe concludes that US companies, relatively speaking, stress cost efficiency (while compromised in the long run), while Japanese companies emphasize non-cost factors or effectiveness

(which will be improved in the long term). This study also implies how different cultures affect the outcome of global sourcing.

Rexha & Miyamoto [36] examine global sourcing issues on Australian subsidiaries of multinational corporations (MNCs), and conclude that intra-firm trade will play a different level of importance among different countries and areas. Besides, the drivers of global sourcing also differ from place to place.

➤ *Evolution and classification issues*

Undoubtedly, the purposes and strategies of global sourcing evolve with time. Thus, not surprisingly, many frameworks for either vertical (evolution) or horizontal (classification) classifications of global sourcing are proposed in literature.

On the one hand, with regard to the evolution progress, Monczka & Trent [25] [26] [27] may have provided the most complete typology of global sourcing to date. According to Monczka & Trent, there are four phases in the evolution of global sourcing: domestic purchasing only (phase 1), foreign buying based on need (phase 2), foreign buying as part of a procurement strategy (phase 3), and integration of a global procurement strategy (phase 4) [5] [36] [35].

On the other hand, from the perspective on classification, Li, Murray & Scott [20] provide an interesting framework. Generally speaking, they divide the country-of-origin (COO) into three sub-categories: COO of design (e.g., designed in Japan), COO of assembly (e.g., assembled in Mexico), and COO of corporation (e.g., IBM known as a US firm). Besides, from the perspective on sourcing targets, Murray [28] proposes that firms make sourcing decisions on two phases: production-component sourcing and assembly sourcing, combining the concerns of “domestic versus foreign sourcing (i.e., location aspect)” and “internal versus external sourcing (ownership aspect).”

2.2 Electronic Business

2.2.1 Definitions and formats of electronic business

The Internet has become increasingly important to organizations for certain aspects of electronic business (EB) [4]. It helps to redefine how back-end operations are conducted, and in the process alters the roles and relationships of various parties. Hence, it is believed to have an even more profound impact on B2B interactions. Various terms, such as e-catalog, e-procurement, and B2B EC, that are relevant to EB, are all cited as enablers to efficient business operations. Even though different definitions abound in the literature, this study takes on Lee & Whang’s [18] definition of EB, “the planning and execution of the front-end and back-end operations in the supply chain using the Internet.”

2.2.2 Perspectives on examining the effects of electronic business on SCM

The transition or evolution of buyer-seller relationships, in general, is from open market negotiation, through

cooperation and coordination, to collaboration [40]. This trend can be approached from three perspectives (i.e., from transaction-oriented, through information flow-based, to relationship-focused), when mapping global sourcing evolution. In the following, literature relevant to EB on SCM is reviewed and categorized into one of these three perspectives.

➤ *Transaction-cost-based perspective*

In general, with regard to citing the benefits of applying IT into business, cost and efficiency are always regarded as key benefits and drivers. It is no exception for EB-based applications. For instance, Baron et al. [3] propose that the major benefits of e-catalogs for both suppliers and retailers include drastically reduced production costs, expanded markets, and reduced processing costs.

In addition to the concern of the key components of eMarket hypotheses (i.e., search cost and coordination cost) [23]; Barua, Ravindran & Whinston [4] suggest the framework to be extended by an evaluation cost when deploying supplier-selection strategies and global sourcing activities. They develop an analytical model that allows a buyer to maximize the payoff from the selection process. In this model, three related but identical dimensions are stressed: medium of transaction (manual versus electronic), product type (standard versus unique), and types of costs (search, communication and evaluation), where costs are taken as a function of the nature of the product and the type of medium.

Essig & Arnold [10] enrich the economic impact of the eMarketplace from a theoretical perspective. Based on information economics theory, an analytical model with 6 steps is proposed. Step 1 analyzes the consequences of improved information and communication technology on a macro level. Step 2 takes a closer look at the transaction frame as a combination of macro- and micro-analysis. Step 3 and 4 take a closer look at the consequence for various purchasing situations and transactions based on information economics and transaction analysis. Step 5 provides general recommendations for their applications based on its e-procurement matrix, which is a combination analysis of information qualities and transaction analysis. Finally, Step 6 shows the consequences for e-marketplaces in bringing together suppliers and customers.

Markus [24] argues whether the phenomenon of EB activities can be fully explained by economic-centered theories. By taking a phenomenon-based approach, Markus investigates four famous and successful e-marketplaces (i.e., Global Sources, PartMiner, Converge, and Ecnnet), which represent those with different natures, founder background and major objectives. Markus finds various behavior patterns and operating philosophies, and concludes: (1) successful e-marketplaces do very different things; (2) they are highly dynamic in form and function; (3) they do not all increase price transparency; (4) there is no simple relationship between ownership/seller power; and (5) e-marketplaces have different IT implementations of the same functionality. In

other words, it is obvious that economic-based theories cannot fully explain the phenomenon of eMarketplaces in the real world, which is in line with [8].

➤ *Information-flow-based perspective*

With regard to the impacts of EB on SC integration from an information-flow-based perspective, there are at least three issues or benefits being mentioned in the literature: negotiation mechanism, coordinated workflow, and information integration.

Negotiation and collaboration often work together to find appropriate supplying companies or solutions for supplier replacement processes. Besides, a backup mechanism can also be implemented by these activities. Ito & Salleh [15], hence, employ the idea of the open tender concept with intelligent agents and a blackboard-based negotiation mechanism to develop a collaborative SC system. It is then applied in a parts/material supply system in Japan in an effort to find alternative suppliers when origin suppliers have problems in time delivery.

Lee & Whang [18] regard coordinated workflow as one of the critical dimensions of SC integration. They suggest that workflow coordination helps to deal with three tasks: efficient procurement and automated services, facilitating order processing and financial flows, and procurement coordination (by supplier selection, order quote generation, and the integration of purchasing decisions).

Moreover, information integration, considered the foundation of SC integration, is also important in this regard. One common approach is the use of Internet information hubs. It is a node in the data network where multiple organizations interact in pursuit of SC integration. Besides, it has the capabilities of data storage, information processing, and push/pull publishing, which can be analogized to what “cross-docking” accomplishes in the physical logistics world [18].

➤ *Relationship-based perspective*

Recently, relationship management and strategic issues are cited as key for those companies that want to implement EB applications successfully. This is because the implementation of EB in the SC is not only the realization of a technology change, but also a process of organizational change. More specifically, different implementation phases reflect different levels of complexity in terms of technical implementation, process changes and trading partner relationships [33].

Nguyen & Harrison [33] explore the roles of EB in maintaining different types of supplier-buyer relationships. They propose a two-dimensional framework that can be used in assessing the relationship of SC to EB: the means of communication (different types of electronic business applications) and the type of information being exchanged (operational or strategic approach). Besides, this framework also suggests three possible alternatives for developing and maintaining supplier/buyer relationships when integrating EB into business processes: step-by-step formulation, quick build up, and adaptation.

Dai & Kauffman [8] argue that, in addition to cost reduction, other benefits such as maintaining established long-term relationships with preferred suppliers should be highlighted as well. These mechanisms are taken as the reasons for the existence of private hub and public market mechanisms. In other words, *private aggregating and negotiating mechanisms* are being adopted for large quantity business supply purchases, while *public market mechanisms* are more often adopted when firms face uncertain and high variance demand.

Besides, previous research reports that buyers prefer to transact with just a handful of suppliers (rather than having a larger supplier base) so that suppliers have incentives to make specific investments in systems that enable and support buyer-supplier coordination [2]. Dai & Kauffman [8] conclude that private aggregating and matching networks are not predicted by the theory of electronic markets, which again highlights the importance of relationship management. Besides, online B2B markets are also found to be a driver in promoting expertise sharing and collaboration among multiple players.

Lee & Whang [18] propose that, due to the establishment of new buyer-seller relationships, new business models will emerge in the context of SC integration. The first model comprises “virtual resources,” which can be pooled to create a secondary market of virtual resources. Secondly, SC will restructure for gaining efficiencies, especially in the substitution and separation of information flows, financial flows, and physical flows.

2.2.3 Future trends of electronic business with regard to SCM

With the spread of digitalization, one could argue that EB has taken on many of the characteristics of financial trading: from simple to complex transactions, from middlemen to speculators, from transactions to solutions, and from buyer-seller exchange transactions to seller side asset swaps.

Deloitte Consulting, and Deloitte & Touche [9] propose six possible trends of B2B: (1) the formation of X2X networks, which will help to seek new business models to leverage core competencies; (2) the proliferation of niche exchanges; (3) the development of industry-wide standards; (4) the rise of private vertical hub and co-investment with existing partners; (5) companies take a portfolio approach to effectively leverage value chain capabilities by utilizing the means mentioned above; and (6) re-optimization of Internet processes to leverage the new environment and its dynamics.

2.3 Strategic Alignment

A well-known framework for analyzing the impacts of IT on organizations and business networks is the strategic alignment model [13]. In this model, the authors distinguish between the business domain (business strategy and business architecture) and the technology domain (information strategy and IT architecture) in an

organization. The two domains can influence each other in two ways. They distinguish two main perspectives on how the alignment between the domains can take place. In the first perspective (alignment) the business strategy is the driving force for business architecture or information strategy, ultimately affecting the IT architecture. In the second perspective (impact) the IT strategy is the driving force for IT architecture or business strategy, ultimately affecting business architecture. Furthermore, when analyzing the enabler or the inhibitors to alignment, Henderson & Venkatraman [13] proposed four strategic perspectives, namely strategic execution, technology potential, competitive potential, and service level.

3. Framework for E-Business and Global Sourcing

The study aims at summarizing the relationships between EB and global sourcing, as well as the (potential) benefits that EB might contribute to global sourcing. The relationships between EB and global sourcing are analyzed from two angles, namely from a theoretical basis (i.e., what theories are applied), and covered business scope; based on an extensive literature review. Benefits that EB can contribute to global sourcing will be discussed at two levels: SC components and alignment. Finally, a framework providing insights in global sourcing and EB is developed.

3.1 Analysis on the Relationship between EB and global sourcing

3.1.1 Theoretical aspect

From the perspective of the theoretical foundations of EB and global sourcing, both fields take economic oriented theories as their foundation. Amongst these theories, cost driven issues are cited most often, particularly when emphasizing the development stage. As a result of significant differences between the nature and implied assumptions of EB and global sourcing, not all economic theories are equally applied in both fields. In other words, studies of EB rely less on economic disciplines in comparison to global sourcing. For instance, the core theory in EB is the e-market hypothesis [23], which is derived from transaction cost theory. On the contrary, global sourcing applies more economic theories. Generally speaking, the major differences lie in the assumption of the world-view. EB assumes that the whole business is positioned within a theoretical (or virtual and perfect) world, which implies that there is no significant difference between global reach and local reach. Consequently, some practical issues such as transfer price, tax and exchange rate fluctuation are not considered in most EB applications. On the contrary, global sourcing, which is an extension of regional operations aiming for efficient operations across the world, stresses the practical concerns that are relevant to sourcing structure, locations, and stability; hence, it

regards such financial topics as practical means for improvement.

3.1.2 Applied aspect

The breadth of covered business scope, generally speaking, can be measured on two dimensions: vertical (i.e., the number of functions), and horizontal (i.e., the variety of the support of sourcing business with various focuses and locations).

On one hand, with respect to the vertical dimension, global sourcing creates close linkage with overall operations via adopting new strategies or changing the physical settings; whereas EB deploys a new infrastructure for integrating all relevant tasks without changing the existing structure. In other words, due to the mechanisms offered, EB enables the possibility of integrating or bundling the forward and downward activities of global sourcing more tightly (such as supplier selection, performance evaluation, and contracting), which in turn, streamline the overall global sourcing operations without requiring much extra effort.

On the other hand, for the horizontal dimension, according to the evolution stages of buyer-seller relationships of global sourcing [37], and that of EB [40], both take similar transformation patterns. Because various EB applications weigh players, founders and concerns (such as public versus private) differently, they can satisfy different requirements of global sourcing in different stages. For instance, the public hub offers the mechanism for cost efficient operations such as lowering switching cost, coordination cost, and ordering cost; while the private hub helps to strengthen the relationship by information sharing and coordination.

3.1.3 Flow perspectives

When talking about the roles of flows (i.e., information flow, physical flow, and financial flow), global sourcing and EB have different focuses. Global sourcing focuses more on financial flows and physical flows, and bundles all the flows tightly with the existing structure. On the contrary, EB stresses mainly information flows, and assumes that there is no further need to change organization structures or to be concerned about physical flows. Hence, different investment strategies and integration paradigms arise. More specifically, EB tends to synchronize flows and structure by investing in information infrastructures, while global sourcing prefers to invest in physical / business infrastructures so as to streamline all flows and structures.

3.1.4 In Summary

The evolution stages and reference theories of global sourcing are similar to that of EB. Global sourcing is a kind of strategy for improving the performance, while EB is a type of application or mechanism for satisfying new requirements. As a consequence, EB can be regarded as a means for solving the requirements of global

sourcing.

Moreover, the literature suggests a contingency perspective due to the variety of contexts in global sourcing [29]. This argument is consistent with what is observed from the linkage between EB and global sourcing, which might imply that lots of opportunities exist for utilizing the EB mechanisms for supporting various types of global sourcing in different contexts.

3.2 How does EB benefit global sourcing?

In this section, benefits of EB to global sourcing are discussed at two levels: Supply Chain components and alignment issues.

3.2.1 Supply Chain components

Structure, control, and optimization are regarded as three main components of a SC [6] [7], all within the context of globalization. These four components are elaborated on below.

➤ *Structural aspect*

When analyzing the effects of global sourcing structure, EB helps to deal with at least six issues: (a) extend the possible set of global supplier base (i.e., extending to those suppliers are in foreign countries with external format); (b) substitute physical IPOs by virtual EB applications; (c) create complete competition markets and eliminate the effects of (supplier) switching costs; (d) separate but ensure the synchronization of the flows and the structure (which will result in better management policies and higher flexibility of structure adjustment); (e) offer the possibility of global reach by using public hubs; and (f) transform partnerships by using the private hubs and replace the means of conventional vertical and horizontal integration.

➤ *Control aspect*

By integrating the functions of information hubs, agent-based coordination mechanisms, and blackboard-based negotiation systems, real time monitoring and collaboration will help to speed up response to those situations in emergency (e.g., an order cannot be delivered on time or on schedule). In short, a backup mechanism of global sourcing (especially for standardized materials) is thus established.

Meanwhile, in regard to non-standardized parts, EB applications are also helpful in transforming some non-standardized parts (i.e., e-hierarchical oriented products) into standardized types (i.e., e-market based products). It implies that not only intensive knowledge sharing and information exchange will be established, but EB also assists in examining the quality of suppliers and keeping those with good quality as long-term partners.

From a market perspective, a public hub is also beneficial for competitors to source collectively and globally (i.e., achieving the goal of “co-competition” for non-core parts). Besides, reverse auction can be efficiently executed for those parts with excess sourcing

[24]. Hence, under existing control mechanisms and bargaining power structure, buyers might have more choices and means to face the sourcing issues, with the help of EB applications.

Finally, with regard to financial control, EB is able to help real time decisions such as negotiation for the appropriate transfer price and identification of the formulation and formalization of a sourcing contract. However, unfortunately, EB cannot contribute much in this area up till now; but it is expected to provide better solutions or mechanisms (such as real time clearance and flexible contracting) in the near future by creating new EB business models and functions.

To sum up, because of information sharing and coordination mechanisms, global sourcing becomes more easy to control, and in turn, raises the possibility of stronger partner relationships.

➤ *Optimization aspect*

The optimization aspect reflects how global sourcing is optimally designed for, hence EB cannot directly enhance the outcome or operations.

➤ *Micro-environment aspect*

It is believed that if EB is taken in the context of global sourcing, it will evoke the changes of the existing corporate culture, (the speed of) product maturity and popularity, SC maturity, and the stages of global sourcing. It might even result in the transformation of existing corporate paradigms, and the next wave of revolutions in global sourcing and SC operations.

3.2.2 Alignment aspect

Conceptually, if global sourcing is regarded as a managerial / strategic issue, with proper business architecture and strategy, whereas EB is regarded as an IT issue, with proper IT architecture and strategy as well, different alignment strategies can be taken. In general, when integrating EB and global sourcing, two alignment strategies can be found: “strategic execution” and “technology potential”. The most significant examples include the stories of eMarketplaces such as PartMiner, Converge, and Cnet [24].

To sum up, due to the features of EB and its variety of functionalities, it may propel global sourcing towards improved performance. However, as mentioned earlier, EB cannot ensure the stability of physical flows and financial flows for global sourcing, unless potential partners are involved in this system.

3.3 An insight in EB and global sourcing: A proposed framework

In this section, two research questions will be addressed:

- “what are the relationships between global sourcing and EB?”
- “how do EB applications and strategies help global sourcing lead to better performance ?”

“What are the relationships between global sourcing and EB?”

can be answered from three aspects. In the first place, from the theoretical perspective, both EB and global sourcing are mainly based on economic-oriented theories, and include the concerns of strategic relationship management. In terms of business scope, EB helps to speed up the evolution of global sourcing stages. Beyond that, integrating and extending relevant activities into global sourcing (such as supplier selection and evaluation, and afterwards reverse sourcing) can be achieved without huge investment. Moreover, with regard to the flows, because EB and global sourcing have different focuses (i.e., information flows versus physical flows plus organizational structures), integrating both fields might lead to better control and coordination for all flows (but still having limited benefits on financial flows).

“How do EB applications and strategies help global sourcing lead to better performance?”

can be explained as follows. Firstly, EB helps to enrich SC components in structure elements (such as more players and more alternatives for location expansion) and control mechanisms (such as sense response more quickly, and more tightly monitoring and communications). Meanwhile, the micro-environment will also be influenced either directly or indirectly by the adoption of EB. Secondly, from the alignment perspective, with the help of EB, global sourcing has the potential for evoking alignment strategies such as “strategic execution” and “technology potential,” and thus creating better outcomes (such as better performance, improved partnership, and new business models).

As such, a framework is proposed to illustrate how EB and global sourcing interact, and is illustrated in Figure 1.

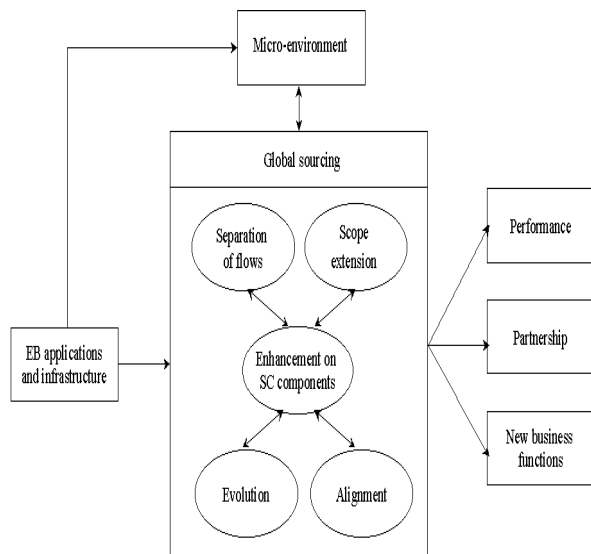


Figure 1 : A proposed framework of how EB and global sourcing interact

4. Conclusions

Global sourcing can benefit from the functionality of electronic business (EB) by exhibiting more flexible structures and added opportunities in communications and transactions with partners among worldwide supply chains/networks. This study aims to answer two research questions, “what are the relationships between global sourcing and EB?” and “how do EB applications and strategies help global sourcing lead to better performance?”

Our literature review addresses the relationships between global sourcing and EB from three perspectives: the applied theories, the covered business scope, and the changing roles of flows. In analyzing the potential benefits of EB to global sourcing, the enhancement on SC components (i.e., structure, control, and optimization), and alignment effects are discussed. Finally, a framework is proposed to highlight how EB and global sourcing interact with each other, resulting in five major issues: the enhancement of SC components, the changing micro-environment, the effect of accelerating evolution of global sourcing, the integration of activities, and the significant improvement on outcomes (i.e., better performance, improved partnership, and new business models). This framework sets the stage for future empirical validation in creating an operational framework and roadmap for improved global sourcing.

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