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Disintermediation of traditional chemical intermediary roles in the Electronic Business-to-Business (e-B2B) exchange world

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ABSTRACT

The traditional chemical distribution industry is a multi-billion dollar business and with the introduction of Electronic Business-to-Business (e-B2B) exchanges to the global chemical industry there is some concern about the future roles of traditional intermediaries (TI). The objectives of this research paper are to investigate the possibility of disintermediation of roles of TI by e-B2B exchanges and to identify the value adding role of TI as perceived by chemical distributors and buyers. If these value adding roles may be the key to future survival for TI in the marketplace. International data collected from e-B2B exchanges, chemical distributors and buyers are used. Content analysis of e-B2B exchanges was conducted while survey questionnaires were used for distributors and buyers using a cross-sectional approach. The research shows that whilst the e-B2B exchanges have a role to play in the chemical supply chain management there were still sub-functions which the buyers viewed that the TI could offer to them. So the supplier–buyer relationships could be maintained between the buyers and the TI, at least for the time being, until newer business models of e-B2B exchanges begins to compete with the TI's to offer these sub-functions. The research holds valuable implications for TI in the chemical industry regarding the need for differentiation with a view building new competences to survive the encroachment of their traditional business base by e-B2B exchanges. The impact of e-B2B exchanges on TI in the chemical industry has not previously been studied in-depth. This paper provides new knowledge and makes a contribution by providing evidence of evolution in the chemical distribution channels.

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1. Introduction

Much has been written about electronic commerce (EC) and Electronic Business-to-Business (e-B2B) exchanges in relation to the roles they play and these roles seems to be numerous (e.g. Smith, 2009; Bull, 2010). This view was also supported by the argument that outdated distribution channels were being replaced by distributors that could add value to the customers (Hammer, 2000) with traditional goods, services and information supply chains being obliterated in the process (Datta, 2005). Hence, manufacturers can by-pass traditional intermediaries (TI) such as distributors, resellers, dealers and retailers by selling direct by using the internet channels (Lee et al., 2003; Day and Bens, 2005). The introduction of e-B2B exchanges to the chemical industry has raised concerns about the future roles of TI for chemical distributions. Can e-B2B exchanges cause channel conflict and disintermediation of the TI? Are there TI roles that can be usurped by e-B2B exchanges?

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This research aims to assess the possible current and future impact of e-B2B exchanges on the roles of TI in the global chemical industry, thus allowing strategic planners across that sector to better anticipate changes in distribution dynamics and buyers' preferences. The research also examined the roles that chemical distributors considered as important to the buyers in order to continue their services to the buyers and also the roles that buyers considered as important to them in retaining the services of the distributors.

2. Literature review

2.1. Roles of traditional intermediaries (TI)

All products produced by manufacturers have to be delivered in a timely manner to the correct location and to the right people (Chung, 2001). TI play an important role for both the manufacturers and buyers (Balabanis, 2005; Giaglis et al., 2002). In broad terms, buyers utilise TI because they have the advantage of a single sourcing centre. The TI represents other manufacturers, conduct business on a long-term basis, make the effort to build on relationships with buyers and provide a shorter supply lines to the buyers by keeping stocks. Malone et al. (1987) provide the reasons to have TI's as advocating consistency in standards, allocations of assets and reducing the costs in coordination. Issues like search costs, inadequate market feedback, risks in providing prices and contracts' fulfillment are better managed by TI as highlighted by Bailey and Bakos (1997).

According to Whinston et al. (1997), the TI helps to facilitate transactions between buyers and manufacturers through providing value-added service such as product quality assurances, product warranties and information, logistics support and aggregation. Aggregation is where the buyers and manufacturers are brought together under one roof to provide a one-stop shopping (Kaplan and Sawhney, 2000). The TI enhances their roles by offering an effective supply chain to meet the customers' requirements at a competitive cost (Overby and Min, 2002; Fung et al., 2007). There is no literature that merges all the previous research into a single coherent study on the total roles of the TI. This study compiles all the market functions and sub-functions roles of the TI into a coherent framework for research purposes.

2.2. Channel conflict and disintermediation by e-B2B exchanges

E-B2B exchanges have substantially different characteristics between the various e-B2B exchanges in terms of their industry and product focus (Christiaanse et al., 2001) the type of relationship and power asymmetries between buyers and suppliers, and the type of product sourcing (Pavlou and El Sawy, 2002). Kaplan and Sawhney (2000, p. 97) observed that "...the appeal of doing business on the web is clear. By bringing together huge numbers of buyers and sellers and by automating transactions, web markets expand the choices available to buyers, give sellers access to new customers, and reduce transactions costs for all the players".

The e-B2B exchanges can be classified by functionality in terms of what businesses buy, and how they buy and also by their ownership. Chart 1 shows the e-B2B exchanges classified by its ownership model as proposed by Hoffman et al. (2002).

Through the introduction of e-B2B exchanges, chemical manufacturers now have an alternative distribution channel. Ruijter (2004) described e-B2B exchange as an electronic marketplace (Bakos, 1991) where buyers and sellers can meet to negotiate for products they wanted to buy and sell at competitive prices through internet facilities (Bakos, 1997, 1998). This definition of e-B2B exchanges is adopted in this study. Forrester Research (Kafka et al., 2000) predicted that only about 180 e-B2B exchanges would survive in 2003 out of the 1000-plus exchanges that were in existence in 2000. However, this was not accurate. eMarket Service (2004, cited in e-Business market w@tch, 2004) estimated there were still about 1000 e-B2B exchanges in the chemical and related industries alone. The breakdown is shown in Table 1. North America alone has 378 e-B2B exchanges in the chemical and related industries. eMarket Service estimated there were only 34 e-B2B exchanges in the chemical industry as shown in Table 1. If plastic and rubber industries are included as part of the chemical industry

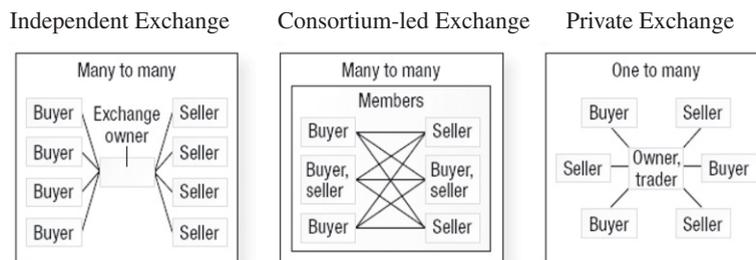


Chart 1. e-B2B exchanges classification by ownership structures. Independent exchange consortium-led exchange private exchange. Source: Hoffman et al. (2002, p. 99).

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