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Policy Concerns for Online B2B Exchanges

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Policy concerns arise as e-business activities become increasingly common. This paper discusses important elements of such concerns, particularly the pro- and anti-competitive assessment of online business-to-business (B2B) exchanges. The definition of markets, the role of quality management and communication, and joint purchasing implications within such environments are related to food distribution systems. Other online business-to-consumer (B2C) and consumer-to-business (C2B) policy concerns are also raised.

The distinctions between various markets within the rapidly evolving e-business environment can be compared to an iceberg: the vast majority of transactions occur under the surface via online business-to-business (B2B) exchanges. While estimates for the overall importance of e-business vary considerably, most suggest that B2B activity accounts for up to ten times the volume of business-to-consumer (B2C) e-commerce. This paper discusses the policy implications of the evolving role of such online B2B exchanges and suggests repercussions for food distribution systems.

Online B2B exchanges can be characterized as groupings of firms using the Internet to communicate and coordinate production, processing, purchasing, and marketing activities. They may be horizontal (across industries or markets) or vertical (throughout a particular supply chain). These business relationships are not newly introduced by the networked economy—much recent discussion with regard to agribusiness structure and behavior has addressed similar policy concerns related to integration of supply chains. This discussion informs the broad analysis of online B2B exchanges. It is also important to recognize that electronic exchanges themselves are not new phenomena; early forms using satellite, telephone, and fax communications predated the move towards e-commerce. What is new is the bi-directional asynchronous and very *rapid* environment introduced by the Internet.

These online B2B exchanges use a variety of price-setting tools to determine the value of the goods and services presented. These can range from auctions to fixed-cost tenders, and all points in between. The nature of this price-setting behavior and the information exchanged by parties within that behavior is the focus of much of the regulatory oversight and policy response.

An early indication of the regulatory position to be taken by the Federal Trade Commission (FTC, 2000) in monitoring and controlling these exchanges is provided in *Entering the 21st Century: Competition Policy in the World of B2B Electronic Marketplaces* (FTC, 2000). This report serves as an excellent background to understanding the balance between the pro- and anti-competitive aspects of these exchanges. Policy toward online B2B exchanges—and more generally, e-business—requires careful consideration. We identify three general areas of discussion of online B2B exchanges that we have encountered in our own work on food distribution. The (legal) definition of markets, the role of quality management and communication, and joint purchasing activities illustrate this discussion, identifying both pro- and anti-competitive potential in each. Policy implications and alternatives are discussed. Following this we look for the common thread(s) that arise when considering the details of food distribution systems.

Definitions of the Market

Of primary importance to any policy discussion of the pro- or anti-competitive actions of exchanges is the notion of market coverage. A market can be defined spatially, temporally, or through product-quality attributes. It has been argued that online markets redefine markets, perhaps making them

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larger in geographic reach.¹ Such a drive would tend to diminish the opportunity for B2B collusion both horizontally and vertically, acting pro-competitively. In any case, the definition of regional and national markets changes dramatically in an online context. On the one hand, firms can more easily link with others in their supply chain and develop efficiencies in both logistics and pricing that could conceivably benefit firms and customers. Similarly, online markets may expand the opportunities for consumers to purchase from firms outside their normal commerce zone. On the other hand, this ease of linkage may bring a perception of collusion or worse as firms act in lock-step in reaching for those efficiencies throughout this supply chain.

One of the more difficult yet critical definitions in antitrust discussions is the concept of collusion. Generally defined as *secret agreement or cooperation especially for an illegal or deceitful purpose*, it is addressed in Section I of the Sherman Act (Kintner, 1973). Agribusiness firms at both the producer and consumer ends of the supply chain have long dealt with issues surrounding the legalities of contracts and combinations. This discussion becomes complicated due to the antitrust exemptions granted to production agriculture through the 1922 Capper-Volstead Act. This legislation allows agricultural cooperatives and associations to act together for members' mutual benefit. The courts have generally been able to resolve related disputes based on the limited positions such organizations take within the market. The question now becomes "What happens when such organizations unite with other businesses in a B2B or B2C arrangement that carries food from farm gate to dinner plate?" It may be argued that previous offline arrangements have already addressed this scenario. Add to this concerns that certain online B2B exchanges may alter market structure and may particularly "thin" the market, creating an environment where a limited volume of trade can be tracked by open, transparent, and traditional price-setting vehicles. Concern over such environments has recently led to mandatory price-reporting systems for livestock pur-

chases. In agricultural commodity markets there may be pronounced seasonal or geographical market boundaries that remain when online. Thus traditional concerns over monopsony power and the role of protection for producers (Capper-Volstead) may remain.

We would insert at this point one of the greatest factors in the collusion debate in online markets: information exchange between the players. In the past, marketing or production arrangements could be close but still kept at arm's length through the control of each firm's knowledge of its partners' business. In the online environment, data exchange is rapid and ubiquitous—access to data that in the past was rigorously guarded as proprietary is enhanced. Given this, some would argue that the road to collusion, with its related anti-competitive effects, would inevitably be increasingly traveled.

Quality Signals

As food and agricultural quality issues become more holistic and complex, the flow of information between suppliers and customers—whether other firms (B2B) or consumers (B2C)—takes center stage. The quality-management and marketing literatures discuss this environment as one that will require novel communication and coordination strategies within supply chains. Such cooperative efforts allow quality attributes to be better tracked, thereby preserving the identity of the products and their related production and processing techniques. E-business has been identified as a means by which firms can provide downstream customers with key quality information. Traceback, source verification, and third-party certification tools have been identified as standards that firms will have to implement in order to remain competitive.

Within such environments the enhanced flow of information about agricultural and food quality attributes, encouraged by operating within online B2B exchanges, can have pro-competitive impacts if and when desired attributes that are demanded can be differentiated/segregated from lower cost "generic" (undifferentiated) products and signaled to potential buyers. To achieve such a goal, certain quality standards for the products and/or online B2B exchanges themselves (trading platform standards) will be required. For example, an online B2B exchange may require all fresh-cut produce to be har-

¹ Hooker, Heilig, and Ernst (2001) discuss whether such is always true in agribusiness applications, concluding that online market reach may be little changed for many (perishable) products.

vested and packed under strict food-safety guidelines. The exchange may then enter into an arrangement with a third-party training or certification agent to assure this quality. In such cases, the online B2B exchange develops additional marketing functions.

A critical response may arise should certain businesses be unable to achieve such quality management or communication standards precluding their activity in online B2B exchanges. In cases where (quasi-)voluntary quality-management systems (Caswell, Bredahl, and Hooker, 1998) fail, a policy concern (market failure) arises which may lead to an agency stepping in to assure quality (e.g., marketing regulations, food safety policy, labeling, etc.). This discussion suggests at least two research questions: Does the adoption of online B2B exchanges increase or reduce the number of quality-related market failures? Are such (potential) failures recognized early enough because of the enhanced level of information exchange within the online B2B exchange so that such failures can be averted or minimized? The development of either of these situations will be dependent on the policy position selected.

Joint Purchasing

The enhancement of buyer-seller relations through online B2B exchanges has been perhaps one of the greatest changes introduced by the Internet. It has been suggested that joint or cooperative purchasing and selling is an example of such changes (Harbour, 2001). From a buyer's perspective, the benefit of joint purchasing lies in the reduced acquisition cost of products and the increased negotiating power over terms of transaction. From the seller's perspective, joint purchasing can reduce the risks and costs involved with anticipating the quantity and quality of consumer demand and thereby reduce cost involved with inventory control. While the concept and practice of joint purchasing predates the Internet, the interactive and instantaneous nature of communication and the reach of the Internet make it an effective medium that provides new opportunities for such collective actions.

There is a theoretical ramification with policy implications that emerges from these developments. One of the oldest economic problems is the "regulation of economic power" (Galbraith, 1954). Two

solutions for the problem of economic power were traditionally recognized: competition and regulation by the state. However, the theory of countervailing power argues that a third mechanism can check and regulate economic power. The concept of countervailing power, introduced by Galbraith, suggests that a solution to the problem of economic power can be achieved by "the neutralization of one position of economic power by another" (p.54). The basic notion is that the market power of large firms is often curbed not just by competition from other firms at the same horizontal level, but also by the power of customers or suppliers.

The notion of countervailing power is supported by the general theory of the second best (Lipsey and Lancaster, 1956). The theory of second best suggests that if one of the standard efficiency conditions—namely the conditions for a perfectly competitive market, cannot be satisfied, the other efficiency conditions are no longer desirable. According to this theory, market solutions would converge upon "second best solutions" and the policy selection then evaluates this set of viable second best solutions. In this context it is possible to argue that in the absence of the optimal solution due to lack of necessary conditions for perfect competition, countervailing power of strong buyers may well be a second-best solution that holds the economic power of strong sellers in check.

Rha and Widdows (forthcoming) discuss the characteristics of the Internet that make it an efficient vehicle for buyer countervailing power including effective B2C, C2B (customer-to-business), and C2C (customer-to-customer) bi-directional communications, the elimination of the friction of distance, the possibility of disintermediation and simplification of supply chains, and the creation of virtual storefronts that enable easier market entry for retailers. They argue that these e-business characteristics increase the opportunities for collective or joint purchasing. For example, Foodservice.com is a website that aggregates the demands of institutional purchasers that are not large enough to qualify for the maximum discount. Through aggregation, smaller buyers can enjoy such discounts (Harbour, 2001).

If the concept of countervailing power is viable for a particular buyer-seller relationship, then the theory of second best would seem to mitigate

some of the need for anti-trust policy towards online joint purchasing. However, policy usually has to be made on the assumption that one or more of the Paretian conditions are not fulfilled (Layard and Walters, 1978) and there may be situations where a "second best" type of policy may have to be pursued (Lipsey and Lancaster, 1956 p.21). New situations in online B2B exchanges may open up challenges for current (offline) anti-trust policy.

First, as stated above, joint or collective purchasing that is working effectively would allow countervailing power to be viable in the Internet era. But what if the buyers begin to exercise monopsony power to exert unfair advantage? A monopsony occurs when a single buyer or a collective group of buyers is large enough to have market-distorting power over their suppliers (Srodes, 2001). In the strictest sense a monopsony would only occur when all potential buyers band together; the risk of the occurrence of a monopsony are far less than that of a monopoly. However, the case of Covisint, a joint Internet venture of General Motors, Ford and DaimlerChrysler (who between them coordinate \$150 billion of annual joint purchasing orders) may raise serious concerns of possible online monopsony power from a policy perspective (Srodes, 2001; Bailey, 2001).

Second, there is the concern of entry barriers or exclusion. Market competition may be harmed if participants in the joint-purchasing group deny other potential suppliers, competitors, or even customers access to such online B2B exchanges. Similarly, the entry barrier may be technological through access to a proprietary software or trading platform. Note that this denial of membership may come at both the vertical and horizontal levels. A vertical restriction comes from the supplier's side. Once the joint purchasing group reaches a certain critical mass, the supplier may deny service to additional members because of the concern of potential monopsony. Entry barriers may also arise from companies at the same distribution level if firms participating in the joint-purchasing group deny any new membership because they do not wish to share the benefit of a successful joint-purchasing group with new members, who would 'free-ride' on their sunk costs. The denial of membership may become a policy concern if the excluded firms have no alternative means of acquiring the same or substitutable inputs at a comparable price through other

online B2B exchanges or traditional means (Harbour, 2001). As mentioned above, previous agricultural cases and protection provided through Capper-Volstead must be translated to the online environment.

Third, there are switching costs that may raise more serious concerns in the long run. Shapiro and Varian (1999) suggested that as a network attracts more members the value of such a network increases, and thus the cost of switching from such a network to another group increases. Network effects would suggest that if a network, such as a joint-purchasing program, reaches certain critical mass, it could have a possible adverse effect on incentives to set up other competing online B2B exchanges. Furthermore, switching to an offline B2B transaction might not be an option considered due to higher transaction costs and information deficits (Bailey, 2001). Once formed, these online B2B exchanges may become overly conservative and stifle further innovation.

The key policy concern is the *threshold* that distinguishes an efficient joint purchase from the exercise of monopsony power or exclusion. Researchers and policy makers need to identify relevant factors in addressing this issue. If monopsony power is a policy concern we may have to look further at B2C and C2B exchanges for possible guidelines. Certainly from a policy perspective the concern should be over ensuring that competitive benefits obtained by retailers are passed onto consumers. At the beginning of this section, we introduced the notion of countervailing power as a mechanism that introduces checks and balances to economic power. Galbraith's original work (1952) assumed that the gains from the countervailing power of retailers are passed along to consumers. However, Rha and Widdows (forthcoming) suggested that the benefits will only be transferred to consumers when there is competition among retailers and/or there is countervailing power at the consumer level. However, going back to our discussion of collusion, if businesses decide to cooperate beyond joint purchasing for efficiency, anti-competitive concerns such as price fixing may arise. To invoke the defense of countervailing power, second-best policy that strengthens the position of customers or suppliers (e.g., mandatory price reporting, national quality standards and inspection, etc.) may be necessary.

Other Policy Concerns in the Online Environment

Other challenges remain when evaluating E-business strategies and the role of regulatory agencies. When considering B2C strategies for food and beverage products, one critical unresolved issue involves clarifying the distinction between advertising and product information. This issue is important, since the Food and Drug Administration (FDA) and FTC currently have differing spheres of influence and regulatory and oversight standards. The FDA is responsible for label content, the FTC the validity of the advertising message. However, does the inclusion of a company URL on the product packaging extend the label to the online environment or does the website product count as advertising in its own right? If the latter, the higher standards and larger oversight capabilities of the FTC would be applied to the Internet portion of the marketing mix.

Related to this issue of jurisdiction and enforcement, online sales generate a number of basic questions related to taxation, quality standards, and dispute mediation within the United States alone. However, “getting attention” and “progressing toward a solution” are two very different things in this case. Existing commerce law may be applied to online B2B exchanges as a subset of this e-commerce activity in some instances—it has been used to deal with mail order sales, after all—but tying together previously dissociated parts of the supply chain at the transaction speed observed online brings a level of uniqueness to the questions of jurisdiction. Those questions get even more convoluted when they involve firms with operations outside the United States in countries where regulation of transactions and their related marketing issues may be much more (or less) stringent than those for “traditional” commerce activities.

Possibly the simplest example of these jurisdictional concerns is the question of taxation. While a federal moratorium against taxation of Internet sales was recently extended, states are not precluded from enacting their own policies on such taxes. State law in this area varies dramatically across the country. It is therefore unclear what rules will apply once such a moratorium is lifted – especially when the firms involved in B2B or B2C e-commerce are likely to be located in several states or

countries. On the surface, the solution to the taxation questions is simple: invoke a national sales tax to replace existing state taxes. Yet anyone at all familiar with local and state debates over tax rates, taxable items, and distribution of tax income would be hard-pressed to recommend how such an action might occur. As online sale capture an increasing portion of total B2B and B2C transactions, budget concerns alone will force states to address tax law. The question is whether policy can be written in ways that uniformly benefit business and consumers while addressing concerns over jurisdictional rights and obligations.

The Internet is evolving, with lessons being learned about effective C2B and even C2C communication. Consumers are now using e-mail and anti-business Internet sites to announce their dissatisfaction and in an attempt to attain compensation. In addition, many government departments are collecting consumer complaint data via the Internet (e.g., www.consumer.gov/sentinel) and using this information in policy formation. Policy response to online B2B exchanges will likely focus on improving such flows of information, whether firm-to-firm (B2B) or between firms and their customers (B2C and C2B).

Conclusion

We have examined three general areas of discussion of online B2B exchanges and suggested their pro- and anti-competitive implications for food distribution systems. Other areas should be examined to guide policymakers as they seek to come to grips with the rise of e-business. Federal farm policy, for instance, is likely to be effected by the rise of online B2B exchanges. Farmers producing specialty crops may require different levels or types of support from the government. At the same time, food support programs for poor and underprivileged consumers (regulated within the federal Farm Bill) gain new efficiencies from the use of online G2C (government-to-consumer) exchanges to deliver cash benefits or manage food-grant inventories. Additional policy discussions may address socio-demographic or geographic differences of some in the food distribution system that put them at a competitive disadvantage as online B2B exchanges form. Furthermore, what happens with B2B can also happen in B2C, so implications are broader.

In reality, much of the policy discussion we foresee occurring in this arena over the next few years will mirror ongoing debate over general agribusiness consolidation and related market-behavior concerns. The difference is the speed at which this behavior occurs in the networked economy. That same problem of speed will likewise be a concern among policy analysts scrambling to stay current with the discussions that must occur in the general servicing of this emerging industry.

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