MARKETING COOPERATION AMONG RIVALS

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Abstract

Why do competitors form alliances and other cooperative agreements instead of competing openly or engaging in tacit collusion? The rationale presented follows the logic from the economics literature for tacit collusion, although we depart from it and develop new theoretical viewpoints. We consider why the characteristics leading to tacit collusion are insufficient to explain formal cooperation among rivals and propose a set of factors which are necessary for formal cooperative agreements. In addition to these supply side explanations, we also propose that formal cooperation among rivals may generate benefits for consumers. The firm's expectations about consumer utility also explain the formation of formal cooperative agreements among rivals. Therefore, we develop a relatively new area of research in marketing concerning the impact of horizontal cooperation on consumer utility.

MARKETING COOPERATION AMONG RIVALS

Alliances have gained prominence as a form of business organization in the past decade. Cooperation among firms has become more prevalent, both vertical alliances at adjacent stages of the value chain and horizontal alliances at the same stage of the value chain. The latter, in particular, create a tension with the tenets of the neo-classical theory of competition with its concern for *collusion* in oligopolistic settings (Scherer 1980).

Following the literatures in strategy, R&D and economics, marketing is beginning to recognize the growth of cooperative behavior as a strategic marketing tool in competitive markets. Indeed, in 1996, NetScape alone signed more than 500 alliances in an effort to maintain its browser market share and to enter new markets. However, the field's understanding of the determinants of horizontal cooperation, the conditions under which cooperation is successful, and the effects of such cooperation on consumer utility are limited. In fact, marketing theorists and researchers have focused almost exclusively on distribution alliances with downstream channel members (Heide and John 1990, Klein, Frazier and Roth 1990).

Although alliances between firms may be vertical (the partners in the alliance are in adjacent or different positions in the value chain) as indicated above, our particular interest is in horizontal cooperation among rivals where the partners are at the same position in the value chain. These alliances can take various forms of coordination and communication among competitors. Some examples include: airline alliances involving code sharing and operational coordination, such as that proposed by American Airlines and British Airways; pharmaceutical co-marketing of a drug by two different firms, such as the Glaxo and Roche co-marketing agreement for Zantac; joint advertising and marketing of BP and Mobil in some European countries; capacity sharing and price agreements, such as that by the ferry operators on the English Channel; and licensing agreements of a technology standard to a rival, such as the Hitachi-Matsushita licensing of its digital video disk technology to Philips and Sony.

We define horizontal cooperative agreements as common interests among independent partners which are not connected through majority ownership but where the collaboration between the competitors involves pooling specialized resources of some form.

The objective of this paper is to understand why formal horizontal agreements are necessary and, therefore, in which situations they are most likely to occur. The rationale presented follows the arguments for tacit collusion within the economics literature. However, we depart from these arguments and develop new theoretical viewpoints by considering the factors

which are necessary for formal cooperative agreements and why the characteristics leading to tacit collusion are insufficient to explain formal cooperation among rivals. Whereas the economics literature emphasizes the characteristics of the industry to explain tacit collusion, firms also make their decisions based on the expected benefits which they could obtain, in particular benefits drawn from the impact of their decisions on demand. As positive effects are expected in terms of demand, rivals should be inclined to cooperate. A number of these effects follow from benefits not only to the organization but also to consumers in the form of enhanced utility. These forces are shown in Figure 1.

Therefore, our interest is in: (1) consolidating the supply side, and identifying the demand side factors that influence the formation of horizontal alliances; (2) relating tacit cooperation to horizontal formal cooperative agreements; and (3) assessing the effect of horizontal alliances on consumer utility. The rationale of the supply side factors is first discussed and then demand side factors are presented with an emphasis on consumer utility.

LIKELIHOOD OF COOPERATION: SUPPLY SIDE FACTORS

Why do firms collaborate instead of competing? The answer to this question lies in understanding the motivations for firms to cooperate. This motivation can arise due to an industry structure which makes collaboration among competitors mutually advantageous. This is the logic behind the existence of tacit collusion, which is well researched in industrial organization economics. However, tacit collusion is informal and there may be circumstances when a formal cooperative agreement may offer benefits over tacit agreements. For example, when legally possible, an explicit agreement between competitors may be preferred over a tacit agreement, *if the competitors' intentions are not trusted.*

Research in economics has identified a number of factors which lead to an increased likelihood of tacit collusion. It is our thesis that, when tacit collusion is appropriate, there is no need for formal cooperation, which would involve the commitment of the firm and possibly of assets, with consequences for reduced flexibility. But the conditions sufficient for tacit collusion to occur are not always met. Ordinarily, insufficient conditions for tacit collusion should revert to competition among firms. However, competitors may still want to avoid "undue" competition which may be ruinous for them. Then, when legally possible, formal cooperation may offer the guarantees which would be missing from tacit arrangements. We argue that this can arise when

conditions for tacit collusion are insufficient. For example, tacit collusion occurs when it is to firms' mutual advantage to avoid attack and counter-attack. However, each firm remains uncertain as to whether competitors will honor the implied desire to avoid such competitive initiatives. A formal agreement provides a commitment on the part of the competitor, which is more certain than pure implied expectations.

Therefore, when tacit collusion makes economic sense, there is no reason *a priori* to engage in more constraining contracts of cooperation. However, threats to full cooperation exist which deal with the tendency toward opportunistic behavior by the competitor and the lack of complete trust characterizing most relationships among parties. This rationale is the underlying explanation behind transaction cost economics (Williamson 1985). This is also the major research paradigm in vertical relationships between manufacturers and distributors (Anderson and Weitz 1992).

Figure 2 summarizes the forces which drive tacit collusion in competitive situations and the forces which are necessary to lead to a formal cooperation, instead of tacit collusion. The basic rationale underlying the likelihood of tacit collusion concerns the ability to detect competitive behavior (the decisions and reactions of competitors to changes in the market). If competitive decisions and reactions are easy to detect (which is generally more likely in an oligopoly), tacit collusion is more likely to occur. If competitive decisions and reactions are difficult to detect, tacit collusion is less likely because some competitors can behave opportunistically without threat of punishment. Indeed, tacit collusion (Chamberlin 1933) is more likely when detection of aggressive behavior which could cause a war is more likely. More specifically, a number of characteristics leading to the greater likelihood of tacit collusion have been researched, particularly: the long-term view of competitors, repetition of transactions, ability to observe competitors, asymmetries between competitors, multimarket competition, market concentration, and buyer concentration.

Long Term View

Detection of competitive actions and, therefore, tacit collusion are more likely to occur when competitors take a long term view --a "shadow of the future" (Axelrod 1984). There are two types of shadows of the future regarding interactions among economic actors. The first pertains to interactions among firms and the second to interactions between a firm and consumers.

A short term orientation focuses on short term profitability, which may ignore the long term costs associated with an action. Suppose, for example, that firms are tacitly colluding on prices. A cut in price by one firm may generate additional profits until the competitors notice a drop in market share and start cutting prices as well. In the longer term, such price cutting actions lead to lower profitability. Parkhe (1993) shows that when the shadow of the future for interactions among firms is long, the effectiveness of an alliance among firms is higher. The rationale for higher effectiveness is that when firms know that they are likely to be interacting with the same partner again, or they recognize that there are reputational effects related to firm behavior in an alliance, then firms are less inclined to behave opportunistically. As the importance of future interaction rises, the payoffs from mutual cooperation are subject to a lower discount rate, temptation to cheat is reduced, and cooperation becomes easier, since both sides know that an exploitative move can be met by retaliatory behavior in the future.

The greater the nexus between current moves and future consequences, the lower will be the likelihood of opportunistic behavior, since forward-looking expectations of gains hold in check the proclivity toward firm-customer agreement violations. Relationship marketing norms would also suggest an increase in the length of the shadow of the future for firm-consumer interactions. The value of each customer for the firm rises not only because of expectations of lifetime relationships with customers, but also because of the increased potential for word-of-mouth among customers, especially with the advent of worldwide electronic media that enables instantaneous dissemination of consumer comments worldwide.

Repetition of Transactions

If competitors and consumers know that they are likely to interact again, then they are more likely to maximize the combined expected value of present and future interactions than to maximize their value from the present interaction only. Maximizing the value of only the present interaction would create a greater incentive for opportunistic behavior.

Over repeated transactions, it is more likely that a competitor would discover the aggressiveness of a firm and this competitor's predisposition for retaliation (Heil and Robertson 1991). Experimental evidence suggests that, although non-cooperation emerges as the dominant strategy in single play situations, under iterated conditions, cooperation rises substantially (Axelrod 1984). In any interaction between a consumer and a firm, broken promises and cheating will decrease the likelihood of further interaction between the firm and that consumer. By the

same token, a good experience on a transaction will encourage a customer to come back again. Firms are moving towards forming "relationships" with their customers and away from being transaction oriented.

Ability to Observe Competitors

Tacit collusion is less likely when detection lags increase. Lags depend on the marketing instrument used (e.g., advertising vs. price) and on the distribution channel length (i.e., the use of distributors vs. direct marketing). This follows directly from normative models for deriving optimal marketing mix combinations, which incorporate competitive reactions (Lambin, Naert and Bultez 1975). Competitive reactions depend on the time of detection of the competitor's action and on the ability and willingness to react to it (Bowman and Gatignon 1995). Empirical analysis of competitive reactions has shown that different firms react with different lags and in some cases anticipate the competitor's move (Gatignon, Anderson and Helsen 1989). In general, however, the anticipation of competitive moves remains difficult and is characterized by relatively high levels of uncertainty which becomes the basis for the development of competitive strategies. In such cases, formal agreements reduce the level of uncertainty about the behavior of competitors.

Asymmetries Between Competitors

Tacit collusion is more likely when there are few asymmetries between competitors in terms of (i) product differentiation and (ii) differences in marginal costs. It is especially the case that the more the asymmetry in the access to complementary assets for the participating firms, the higher the interdependence of the firms and the less likely are the competitors to exhibit tacit collusion behaviors. Complementary assets are those particular technical (e.g. complementary technologies) and non-technical resources or capabilities (such as marketing, distribution, or service) that contribute toward the composition of the product bundle (Teece 1986). The firm must possess or have access to complementary assets in order to deliver benefits to the customer through a marketable version of the product. For example, software training courses and manuals supplement the core product offering (software) and serve to reinforce user demand. Complementary assets may also be complementary *products* that function in tandem with the firm's product in providing benefits to the customer. For example, hotels provide services such as business centers, personal care services and shopping areas in addition to beds and meals.

As the number of technologies in products keeps rising, no one firm is able to keep abreast of all technologies. While transaction specific assets could lead to opportunism by cooperating firms, the inter-firm dependence -- no one firm controls all the components of a product or service -- creates "hostages" which reduce the risks of opportunistic behavior (Williamson 1983). Tacit collusion is not a method of accessing complementary assets because of the risks involved in "sharing" vital assets. Therefore, formal arrangements for cooperation must be sought for such purposes of bringing together complementary assets, which would be difficult and/or costly for a single firm to possess.

Asymmetry in the need to learn from partners parallels the complementarity of assets. The greater the asymmetry in the need to learn from partners, the higher would be the interdependence of the competitors in the agreement. However, in such cases, if there is no "hostage" on each partner's part, the risks of opportunism remain high and cooperation among rivals is less likely. This is consistent with the idea of avoiding collaboration on core businesses, supposedly on which there is a strong asymmetry in terms of know how and competitive advantage. Thus, cooperative arrangements involving product development, brands, and bundling tend to be formal while horizontal distribution and pricing cooperation can be tacit or formal.

Multimarket Competition

Kotabe, Sahay and Aulakh (1996) suggest that, increasingly, firms operate in multimarket environments. In multimarket environments, the outcomes of actions enacted by firms in one market are dependent on the actions of rivals in the same market as well as in other markets where the firms compete. The horizontal interdependence between firms in a single market context becomes an extended interdependence in a multimarket context. Firms not only have the possibility of increased interaction but also multiple arenas of interaction. Compared to competition in a single market, cooperative possibilities exist along the space dimension (multiple markets).

The possible magnitude of competitive retaliation due to interaction in multiple markets becomes a deterrent to competitive attacks due to the apprehensions of larger losses. Empirical evidence suggests that firms display higher levels of forbearance when multimarket contact increases (Parker and Röller 1997). Tacit collusion is more likely when competitors compete in multiple product markets and/or countries. In such cases, there is a fear of generalized warfare. However, as the complexity of managing multiple products in multiple markets increases,

organizational forms may become more independent. This reduces the awareness of the organization as a whole about the competitive situations in all product/markets. Some centralization of management may be required for getting to know the global competitors well and to manage the product portfolio on a global basis. Formal agreements may, therefore, be an efficient alternative to management centralization.

Market Concentration

Mutual forbearance is at least partly due to an effective decrease in firm concentration. A more highly concentrated industry leaves the consumer more exposed to the likelihood of opportunism and higher prices through tacit or open collusion. Parker and Röller (1997) show that in the US cellular markets in the 1980s, duopolies of independent operators led, in many cases, to collusive behavior and higher prices for consumers. In effect, firms colluded tacitly leading to higher prices. Therefore, the more concentrated the market, the greater the likelihood of tacit collusion.

Buyer Concentration

Tacit collusion is more likely in markets with few buyers. It is easier under this condition for a firm to make and hide deals from competitors. In such markets, customers can exert strong power on suppliers, who will try to avoid that pressure through relationship marketing and loyalty programs. Tacit collusion is another way to gain relative power vis a vis buyers. However, the importance of the share of the markets at stake provides strong incentives for competitors to behave opportunistically. This would, therefore, favor formal agreements over tacit collusion.

Conditions Favoring Formal Cooperative Agreements

Our thesis has been that the presence of the characteristics leading to tacit collusion is necessary before formal collaboration can be envisioned by the firms in the industry. If the conditions were "perfect" for tacit collusion, the firm would avoid the costs of formal cooperative agreements. However, these conditions for tacit cooperation are rarely met at a level where firms have sufficient confidence in the actions of their competitors. Formal cooperative agreements can alleviate the lack of sufficient conditions for tacit collusion.

Formal cooperative agreements are not always a solution either. Investigating the constructs that influence the institutional arrangements of alliances, Sheth and Parvatiyar (1992) proposed that uncertainty and trust levels are the primary determinants of the nature of alliance

relationships. These two factors, i.e., trust and risk, also condition the existence of formal cooperative agreements among rivals. The fear of competition must be balanced with a ***trust*** in the relationship with these competitors (Anderson and Weitz 1992). If trust in partners exists, tacit collusion may be more effective than formal cooperative agreements. The risks are associated with uncertainties about the ***ability to police*** the contractual arrangements and uncertainties about the ***ability to punish*** the partner who does not adhere to the agreed-upon rules of the cooperation.

DEMAND SIDE FACTORS: CONSUMER UTILITY

We now turn to the demand side driving the formation of alliances (Figure 1). The thesis is that alliances may affect consumer utility and that if positive consumer utility is achieved, this should encourage alliances as a form of business organization. Curiously, the alliances literature has not explicitly taken consumer utility into account. Despite the potential for alliances to increase consumer utility, the existing research focus is heavily biased toward producer motivation and producer benefits as the drivers of cooperation among rivals.

Our conceptualization of consumer utility recognizes that it depends on a combination of *search*, *purchase* and *consumption* behaviors. The optimality of the consumer's search strategy is reflected in the trade-off between the perceived benefit and cost of search. The consumer will attempt to lower search costs and enhance benefits. Consumers have been viewed as rational and adaptive decision makers, who, when faced with a choice decision, adopt strategies that are optimal contingent upon their perception of the decision environment.

Past research examining consumer utility is generally limited to price and range of choice, with lower prices and increased choice reflecting increased utility. However, utility is also derived from the consumption of the product. This utility can result from direct benefits provided by the product or can be a consequence of externalities. Katz and Shapiro (1986) define consumption externalities as the increase in utility that a consumer gets from using a product, as a result of other consumers using the same product or other complementary products. The greater the number of other consumers that use the product, the greater is the utility for the consumer. This utility is derived from the act of consumption of the product and is independent of price.

Utility also results from the reduction in consumer uncertainty about benefit levels obtainable and uncertainty about capabilities required to use the product to advantage. When

consumers possess experience that is relevant to a product category, they can derive benefits from a product with little or no expenditure of effort, time or money. However, if a product or service requires the consumer to engage in learning, a firm has to do more to manage the learning process for the consumer in order to facilitate use (Hoch and Deighton 1989). Learning by consumers requires effort on the part of the consumer that may adversely affect the perceived benefits derived. Low behavioral changes minimize the switching cost for the consumer in adopting and effectively using a product. The greater the learning requirements, the lower is the likely consumer utility.

Conceptualizing uncertainty as a sense of doubt that blocks action, Lipshitz and Strauss (1997) find that uncertainty can rise due to incomplete information or inadequate understanding about a situation or outcome. Incomplete information and/or inadequate information about a product lead to uncertainty about desired outcomes from using the product. The greater the consumer uncertainty regarding a product, the lower the consumer utility.

Consistent with Figure 2, we suggest that from a demand-side view, there could also be a progression form non-cooperation to tacit collusion to formal cooperation agreements. For example, firms will be more likely to engage in tacit collusion if primary (rather than secondary demand) is more important. The extent to which standards are important also encourages tacit collusion. The movement to formal cooperative agreements tends to occur if firms feel compelled to avoid competing standards, as in the formal agreement on digital video disks between the Sony-Philips camp and the Matsushita-Hitachi camp. Formal agreements may also be necessary in order to guarantee complementary products and to take advantage of network externalities. Finally, formal alliances may be a means of sharing consumer learning (education) costs and reducing consumer search costs.

Our objective now is to assess the value of alliances on consumer utility. In particular, we will look at the effects of brand alliances, product development alliances, bundling alliances, and channel alliances. Although some research evidence exists, our conclusions must be somewhat speculative with the objective of encouraging future research focused explicitly on alliance effects on consumer utility.

Brand Alliances

Horizontal brand alliances have become more common recently. The objective is to "borrow" superior brand reputation or to leverage complementary reputations. Such alliances

range from the use of another firm's brand name (as in an airline franchise agreement) to the use of dual brand names (as in ingredient branding or affinity branding of credit cards), to the creation of a new umbrella brand (as in the Star Alliance incorporating multiple airlines, such as United, Air Canada, SAS, Thai and Lufthansa).

A positive reputation is comprised of multiple dimensions. However, there is often a halo effect that masks this multidimensionality (Brown and Perry 1994). For example Rao (1994) in a study set in the auto industry, found that high visibility events, such as winning product quality certification contests, improved a firm's reputation which, subsequently, improved firm performance in other areas. Thus, reputation confers a differential advantage to the owner of the reputation. The motive of a brand alliance is to extend this halo effect to other products.

In general, we would expect that brand alliances provide potential gains in consumer utility on the dimensions of decision risk and uncertainty. Consistent with the logic for branding, the consumer may benefit from the information value inherent in a brand name. Brand alliances may reduce decision risk and the cost of information search. Alliances may also provide a signal of product quality in what might otherwise be an ambiguous decision context. Rao, Qu and Ruekert (1997) have shown that the reputation value of a primary brand can enhance the quality claim of a second brand when product quality is unobservable.

The potential gain in consumer utility from brand alliances would seem to depend on the same logic as for brand extensions. For example, consistent with the literature on brand extension, we would expect consumer utility to depend on the quality reputation of the alliance brand name and the fit between the alliance product categories (Aaker and Keller 1990, Keller and Aaker 1992). Airline codesharing, for example, constitutes a special case of brand alliances. Codesharing involves a marketing agreement between two or more airlines whereby one airline's designator code is shown on flights operated by its partner airlines. This would seem to fit the conditions for "logical" brand extension. We would expect that such a brand alliance has the potential to reduce decision risk and information search and to increase consumer utility. Such an alliance also has the potential to deliver enhanced producer service as the dominant airline brand insists on higher service standards for the subsidiary brand and as the two airlines coordinate their schedules to reduce consumer travel time.

Research on brand alliances is limited, although a study of particular note is that of Park, Jun, and Shocker (1996). They study "composite" brands in a brand extension context. Their findings suggest that the combination of two brands with complimentary attributes results in a better attribute profile than the extension of the primary brand alone. Thus, there is a potential

producer benefit from brand alliances. The consumer benefit is left implicit but is tied to the information value inherent in the use of a second brand name which adds complementary attributes to ease the decision process.

The effect of brand alliances on prices paid by consumers is not as clear as the potentially positive effect on information search. The addition of a second brand as a signal of quality may legitimize a higher price for the original brand. Whether the consumer perceives additional value (utility per unit) is not readily answered. Brand alliances and price effects have been investigated recently in the airline industry. It is more involved than brand sharing in that a broader set of alliance arrangements may occur, such as sharing ground operations or maintenance or frequent flyer programmes. It might be expected that codesharing would lower costs (and, therefore, potentially prices) based on economies of scope and density (Office of Aviation and International Economics 1994). Economies of scope occur because it is more economically efficient for routes to be added to a dominant network than to create new points of service. Economies of density occur since the unit costs decline within a network as increased passenger traffic is added.

Nevertheless, whether such producer economies translate into benefits at the consumer level is another matter. One analysis of international aviation on behalf of the US General Accounting Office concludes that there is a benefit in consumer convenience and perhaps a short-run benefit on fares while alliances compete against other alliances, but that the long run effects are unclear (GAO 1995). An in-depth analysis of the former British Airways/US Air alliance and the KLM/Northwest alliance found that both yielded an increase in consumer surplus based on reduced transit time (Office of Aviation and International Economics 1994). Research by Oum, Park and Zhang (1996) focused on non-leader alliances and found that such alliances make the market leader behave more competitively in the form of lower prices and greater capacity, thus benefiting consumers.

Product Development Alliances

The incidence of R&D alliances for new product development has increased substantially in the past decade, partly due to Congress's passage of the National Cooperative Research Act in 1984, which eased antitrust laws to permit collaborative research. From the perspective of the firm, new product development alliances may leverage technology complementarities, reduce development time, share R&D risks, and gain advantages of scale in R&D.

Our interest is in the effects of product development alliances on consumer welfare. Innovation may be retarded if the individual firm perceives a lack of protection for R&D output, in addition to considerable uncertainty as to return on R&D investment (particularly for major innovations). Katz (1986) suggests that when R&D spillovers are high, i.e., when research output can be used by another firm without permission, then the level of R&D conducted will be lower than socially desired. Under these conditions consumer welfare is damaged by the lack of innovation in products and in processes to reduce costs.

Horizontal collusion on R&D holds the promise for an increase in consumer welfare. Analytical research within economics seems to confirm this assertion but with qualifications and a general lack of confirmatory empirical research. Katz (1986), for example suggests that R&D cost-sharing may stimulate R&D and innovation, especially in markets that have strong spillover effects in the absence of cooperation. This conclusion has been refined by D'Aspremont and Jacquemin (1988) who find that R&D alliances are socially beneficial in industries with a few firms and characterized by R&D which generates high spillover effects. Finally, Baumol (1992), in a review of the literature on horizontal R&D collusion concludes that technology cartels encourage innovation dissemination and may encourage increased R&D levels due to cost sharing and elimination of duplication. Nevertheless, Baumol also cautions that this is not certain and that the cartel could harm consumer welfare if members use their power to limit innovation, to restrict output and to raise prices.

A quite different logic for assessing the effect of product development alliances on consumer welfare is from the perspective of consumer uncertainty among potential adopters. Consumer uncertainty can arise from three primary sources:

1. uncertainty arising from the risk of being 'stranded' with an obsolete technology or the risk of buying a product that does not interface with complementary products. This uncertainty relates to the formation and adoption of *standards*.
2. uncertainty arising from the risk of buying a product whose benefits depend on ownership of the same product by other consumers. This uncertainty relates to *consumption externalities*.
3. uncertainty arising from the risk of having to invest considerable time, effort or money to be able to derive optimal benefits from a product. This uncertainty is related to *learning requirements* due to switching costs.

When a new product is introduced, uncertainty reduction for the consumer is a primary objective for the firm. Actions to reduce uncertainty include setting standards, creating externalities for the consumer, and reducing learning requirements.

Standards. When a new product comes to the market, consumer uncertainty is reduced when consumers see a common standard that is adhered to by all firms selling that product. Consumers then know that they will not be 'stranded' with a different standard that has little or no market share. Axelrod *et. al.* (1995) suggest that for products affected by externalities, the cost to the consumer of adopting such products is high and consumer interest is usually low when there are no standards. When relevant standards exist, the costs of enhancing, expanding, and using related products decrease in proportion to the relevant markets that accept the standard.

In the absence of a dominant firm and a single obvious technology, efforts to create and sponsor a standard often require the creation of alliances. The creation of an alliance by itself, however, is a necessary but not sufficient condition for the creation of standards. Standards require an installed base (and vice versa) and that means cooperation among firms so that consumers perceive one standard that they can adopt without the fear of being left with an obsolete technology. When rival firms with different, *ab initio*, technologies cooperate to develop and disseminate a common standard, consumer uncertainty is reduced. Standardization enables a higher degree of substitutability in the consumption of a brand and its supporting services, thereby allaying consumer uncertainty. Firms are increasingly willing to combine competencies and resources in order to reduce uncertainty and increase consumer welfare.

Externalities. Consumption externalities are the increase in utility that a consumer derives using a product which is also used by other consumers. Firms have an incentive to increase any potential externalities related to a product in order to increase the attractiveness of the product to the consumer. Increasing externalities for a product requires that firms promote the consumption of other related products together with that of the focal product. As the number of technologies being used in products is increasing, it is likely that related products will be produced by other producers. In order to promote the consumption of related products, a firm will need to reach an understanding with other firms that make complementary or related products. Kotabe, Sahay and Aulakh (1996) suggest that with higher externalities, there is a greater incentive for firms to disperse their technology to producers of complementary products. Complementary products

imply cooperation and the need to share technology suggests interdependence if consumer benefit is to be achieved.

Learning Requirements. Different product categories have varying levels of learning requirements. Consumers invest time, effort and /or money to learn to use a product optimally. New products that are associated with fast moving technologies, such as those relating to computers and telecommunications, require extensive learning by consumers. In contrast, packaged goods have lower learning requirements. Sometimes, the purchase process itself may have high learning requirements, such as electronic searches and shopping. Customers of high technology products tend to want their product usage skills, which they have developed on one brand in a product class, to be transferable across all brands. As learning requirements increase, firms face the need to manage the customer product interface to reduce learning requirements by consumers.

Increasingly, products offer more than one benefit to the consumer via different types of interfaces. For example, playing audio CDs on the computer has a different interface from word processing. Additionally, these two components on the computer come from different firms and a user may need different skill sets to derive audio and word processing benefits. Managing the customer product interface, therefore, means that firms need to manage relationships among themselves. Firms cooperate in order to reduce the uncertainty that the consumer has about learning requirements. Evidence suggests that when different firms contribute different components to a product, the firms resort to higher levels of cooperating (Bucklin and Sengupta 1993) in order to reduce consumer switching costs.

Bundling Alliances

The classic position in economics is that bundling (tie-in product sales) is detrimental to the consumer interest. Such bundling, however, is generally studied at the level of a single firm bundling its own products, as in the present Microsoft case involving the bundling of its net browser with Windows. Such bundling is also generally studied under the assumption that the consumer does not have the choice of a bundled vs. non-bundled product alternative. Guiltinan (1987), and others have made the interesting distinction between *pure bundling* (no choice) and *mixed bundling* (whereby consumers can select the bundle or the individual item). We would expect that the latter alternative represents a potential gain in consumer welfare since consumer

choice is enriched, unless (which seems unlikely) the manufacturer prices the bundle at a higher price than the combination of individual prices.

The value of bundling to the consumer depends very much on the level of consumer sophistication in the product category. As a generalization, bundling (or a total systems solution), would seem to be of most value to unsophisticated consumers - vacation packages, ready-to-use personal computers, etc.. However, sophisticated consumers may be adverse to bundling and prefer to mix and match as they put their own system together, whether a vacation or a computer.

A question which is not addressed in the literature is the effect on consumer utility when bundling occurs *among alliance partners*. If consumers are forced to buy unwanted products, this is obviously detrimental, but this would seem to be unlikely across a set of manufacturers, each of whom is seeking to maximize revenues. Bundled products (such as a personal computer) might be likely to delivery enhanced consumer benefits at lower prices than unbundled products.

In this vein, Chen (1997) contends that bundling can increase consumer welfare via reduced price. Bundling a product and its components (for instance, through an alliance) might provide cost savings which could be passed-on to the consumer. Relatedly, Church and Gandal (1990) suggest that, in the case of a new product introduction, consumer welfare increases when a brand is supported by a wide variety of services. This suggests that bundling complementary products might benefit consumers when demand for components is highly correlated.

Consumer usage of products frequently involves the use of complementary products. The complementarity may arise from use, from the occasion of use, from the process of use, or the time of use. Use complementarity is rising partly because the number of technologies from independent vendors being used in products is increasing. In the context of joint sales promotion, Varadarajan (1986) suggests that complementarities of use of different products by consumers is the largest single determinant of horizontal cooperative sales promotions. For example, use occasion complementarity would be the case when Tylenol cold tablets and Kleenex tissue are jointly promoted. Using a computer together with a printer or digital camera is an instance of product bundling for usage.

In cases where the complementarity of use is high, and the benefits derived by the consumer derive from all the components of the bundle, there are benefits to the consumer from an alliance. In the absence of an alliance, higher product use complementarity would lead to a greater requirement for consumers to mix and match components, occasions and usage times. Greater workload for consumers in the consumption and/or purchase experience decreases utility

for consumers, who are generally cognitive misers with regard to the purchase and consumption experience.

Monroe (1990) has argued that bundling may reduce consumer search, acquisition, and installation costs. Yadav and Monroe (1993) show that the consumer could gain transaction utility (depending on the perceived merit of the deal) from any discount associated with the bundle. All of this suggests that bundling could have positive consumer welfare consequences and that alliances can be an important route to bundling.

Again, this depends on consumer sophistication levels. However, consumer value would seem to be enhanced if unsophisticated consumers were able to buy bundled product systems and sophisticated consumers were able to buy unbundled systems. In either case this assumes a mixed bundling strategy by the manufacturer and a bundled price that is not higher that the combination of the individual item prices.

Varadarajan and Rajaratnam (1986) have pursued the bundling concept under the logic of symbiotic marketing and find that bundling (joint marketing programs) can occur on a number of marketing mix variables. Perhaps the most common is tie-in promotional programs (for example, use American Express and receive a discount on Hertz) which may have generally positive effects on consumer welfare. However, such promotions would seem to be transaction-based and not alliance based, i.e., some expectation of longevity beyond a simple promotion. If companies do provide ongoing promotional bundling, again it would seem that there is a net benefit for the consumer as long as choice remains.

Horizontal Distribution Alliances

A considerable amount of research has been published recently on the rate of alliances in channels of distribution. Much of this research relates to characteristics of successful alliances (usually vertical) and governance issues in managing channel alliances. This research is very much from the point of view of the firm and does not consider consumer welfare issues associated with channel alliances.

If we take a consumer perspective, channels of distribution are meant to deliver three primary benefits - time, place, and form utility: the product or service is available when you want it, where you want it, and in the form that you want it. If we take the perspective of the firm considering distribution alliances, three primary motivations drive it: achieving broader market

access, achieving cost savings, and/or achieving expertise or additional competencies. Now let us combine the producer and consumer views to assess the effects on consumer utility.

Market Access. A major incentive to create distribution alliances with horizontal partners is to gain broader market coverage. Firms leverage complementary salesforces, for example, in order to create the potential for broader market penetration. This could include the pharmaceutical industry and co-marketing of drugs, as in the Glaxo-Roche alliance to market Zantac in the United States. Alliances among horizontal competitors across international markets or adjacent product categories is reasonably common.

In general, market access is the mirror image of consumer benefit on place, time and form utilities. Horizontal alliances would often have the potential to enhance the consumer's interest in providing products or services as needed, where needed, and in the appropriate form. However, this need not always occur. Horizontal distribution alliances could be established to restrict market availability and to gain greater price control. This was the allegation regarding the alliance between American Airlines and British Airways -- that the effect would be to control capacity and with the potential to raise fares. This would seem to be a very real concern if the alliance partners could create a situation of high market concentration.

Cost Savings. A second rationale in horizontal distribution alliances is to achieve cost savings. This could be an argument in favor of the AA-BA alliance - if the cost savings were passed on the consumers. The argument is to better leverage distribution system costs via broader product lines and cross selling. The benefits to consumers are less clear unless the purported cost savings are passed on to the consumer. Such alliances to achieve costs savings may also restrict market coverage with a net effect of reduced time, place and form utilities.

Expertise. Horizontal alliances may provide the expertise necessary to meet consumer needs, as when IBM and Anderson Consulting combine forces to win a contract. The customer gets the solution and greater benefit by achieving the solution faster and in the desired form. An enhancement of expertise should lead to a better product and should, therefore, act very much in the consumer interest in terms of product functionality.

CONCLUSION

Our objective in this paper was twofold. The first was to examine the transition from competition to tacit collusion to formal cooperative agreements. We attempt, thereby, to show that formal cooperation among rivals is theoretically linked to tacit collusion, although the two occur under different conditions. The second was to analyze the influence of formal cooperation among rivals on consumer utility. We thus provide a new perspective on the conceptualization of cooperation among competitors in the marketing literature, which until now has focused largely on a transaction cost based conceptualization of vertical alliances.

We propose the following directions for future research. First, one stream of research should attempt to provide evidence as to when and how firms move from tacit collusion to formal cooperation. Formal agreements may be costly to manage, but the consequences of a competitor not following expected actions (in tacit cooperation) can be much higher. We have offered the first steps toward establishing a theoretical foundation that views formal cooperation within the competition and tacit collusion research paradigm. Until now marketers have tended to analyze alliances without considering the tacit collusion alternative, in part due to the focus on vertical alliances.

Secondly, the benefits of alliances in the extant literature have been investigated almost exclusively from the supply side. However, whether or not formal cooperative agreements are able to deliver consumer benefits is a critical perspective. This paper offers insights into the types of consumer benefits that are obtainable due to cooperative agreements between rivals. In this connection, it is worthwhile to note that the literature in economics has focused almost entirely on price and/or choice as the dimensions of utility. We supplement these dimensions by considering consumption externalities, consumer learning requirements and consumer uncertainty.

This paper is conceptual in nature. However, implications for management are discernible. Although not often admitted by management as a strategic choice, tacit collusion is a very real phenomenon. Marketers should consider formal cooperative agreements instead of tacit cooperation especially when consumer search costs, consumer learning and consumption externalities become important. Supply side conditions for formal cooperative agreements include the ability to monitor **and** punish competitors who may not adhere to the agreement.

Certain dimensions of consumer utility are affected more by certain types of alliances. For example, product development alliances have the potential to reduce consumer uncertainty regarding standards. This implies that product managers should factor-in decisions relating to

standards within joint product development activity. Such decisions will reduce consumer uncertainty, add to the value that consumers attach to the firm's products, and increase the firm's competitiveness. In contrast, an important impact of brand alliances is to reduce consumer search costs.

Finally, this paper has social policy implications. Tacit cooperation often invites anti-trust concerns. However, our contention is that tacit collusion may be superseded by formal cooperation as a more efficient means of providing consumer benefits. In general, tacit cooperation tends to lower consumer utility, mainly in terms of price. By contrast, formal cooperation has the potential to increase consumer utility *and* to provide efficiencies to firms. There is an increasing trend toward the formation of relationships among firms and between firms and consumers. Perhaps, therefore, tacit and formal cooperation can be judged within the same overall framework—where forms of consumer utility (in addition to price and choice) are an integral part of simultaneous evaluation for both tacit and formal cooperation.

This paper represents a somewhat different focus for the marketing field in the new millennium versus the dominant focus of the *Journal of Marketing* since its founding in 1936. Until now the dominant model has been of competition rather than cooperation. Indeed, "cooperation" often has been viewed at odds with what is best for the consumer utility. The prevalence of alliances today represents a new view of limited resources and a need to maximize comparative advantage. It is this perspective on cooperative linkages among rivals that we have pursued.

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Figure 1 - Explaining Competitive Cooperation and its Effects on Consumer Utility

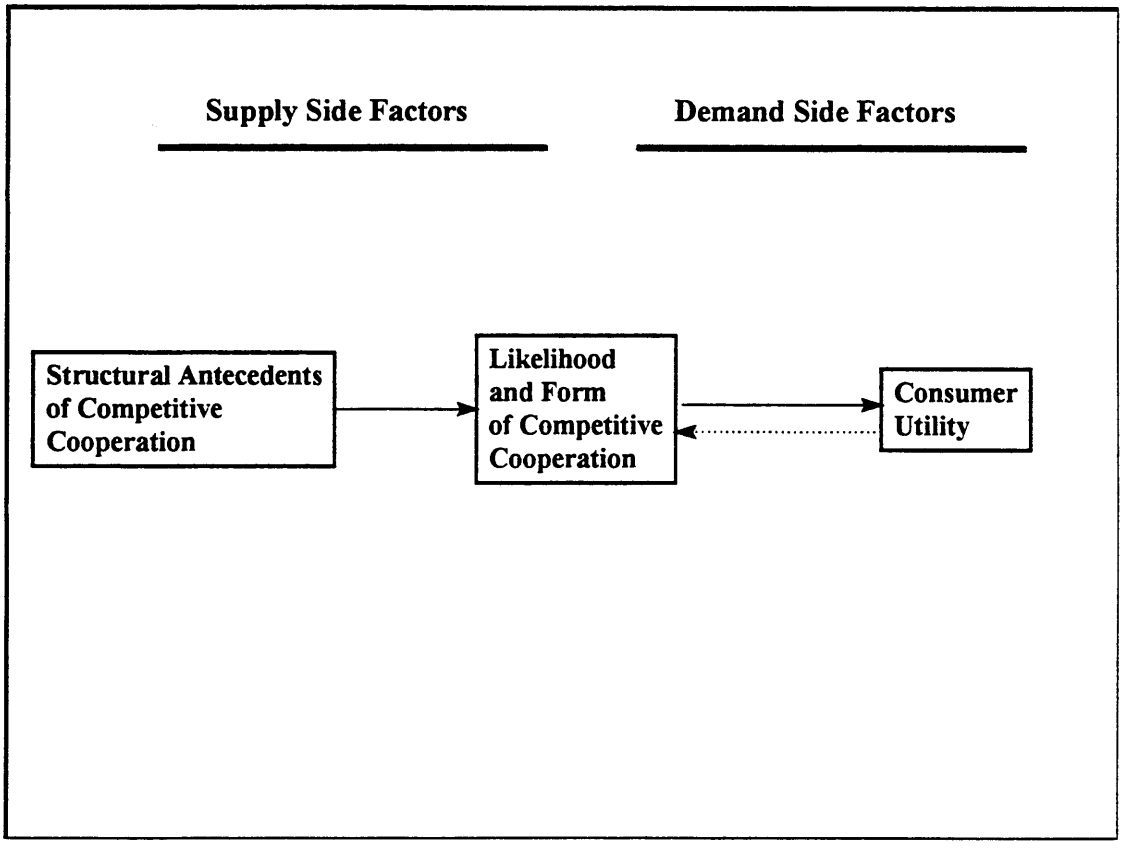

Figure 2 - From Competition to Tacit Collusion to Formal Cooperation