CASE 2

Prices, Market Definition, and the Effects of Merger: Staples-Office Depot (1997)

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INTRODUCTION

On September 4, 1996, the two largest office superstore chains in the United States, Office Depot and Staples, announced their agreement to merge. Seven months later, the Federal Trade Commission voted 4 to 1 to oppose the merger on the grounds that it was likely to harm competition and lead to higher prices in "the market for the sale of consumable office supplies sold through office superstores." The merging parties chose to contest the FTC's actions in court. On June 30, 1997, after a seven-day trial, Judge Thomas F. Hogan of the U.S. District Court for the District of Columbia agreed with the FTC and granted a preliminary injunction, effectively dooming the merger.

Staples broke new ground in terms of both the economic theory and the type of evidence presented at trial in an antitrust case. The antitrust enforcement agencies had traditionally focused on the increased probability of collusion following a merger as the primary theoretical underpinning for merger policy. In contrast, *Staples* spotlighted the potential for a merger to have "unilateral effects," a shift in focus first signaled by the 1992 revision

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of the Department of Justice and FTC *Merger Guidelines.*[1] Focusing on the characteristics of individual suppliers, the FTC argued that Staples, Office Depot, and OfficeMax were sufficiently different from other suppliers of office products, and sufficiently close competitors to each other, that the "sale of office supplies through office superstores" could be defined as a market separate from the sale of office supplies in general. In another departure, for evidence of the likely anticompetitive effect of the merger, the FTC relied primarily on direct estimates of the merger's effect on prices, rather than just predicting that an increase in seller concentration would cause significant (but vaguely specified) price increases. In addition to internal documents describing pricing policies and simple (but powerful) price comparisons between cities where Office Depot and Staples currently competed and those where they did not, the FTC's evidence on price effects included a large-scale econometric model that predicted the effect of the merger on prices. It also included an "event study" that used stock market data to calculate both the effect of the merger on shareholders and the financial market's implicit estimate of the effect of the merger on the prices charged by office superstores.

BACKGROUND

Office Depot and Staples are, respectively, the first- and the second-largest office superstore (OSS) chains in the United States. Staples pioneered the office superstore concept in 1986. In 1997, Staples operated approximately 550 stores in twenty-eight states. It had 1996 revenues of some $4 billion and a stock market valuation of approximately $3 billion at the end of 1996. Office Depot, which adopted the concept of superstores within months after Staples invented it, operated more than 500 stores in thirty-eight states, had 1996 sales of approximately $6.1 billion, and had a stock market value of about $2.2 billion at the end of 1996. The rationale for the superstore concept was simple: While large businesses were able to purchase office supplies through high-volume contract stationers, small businesses and individuals had no comparably convenient, low-cost source of office supplies and other business-related products. The office superstore was to do for office supplies what the supermarket had done for home groceries.

The typical superstore is approximately 23,000 to 30,000 square feet in area, stocks 5000 to 6000 items, is located in an urban business area, and looks like a warehouse. Approximately half of Staples' and Office Depot's revenues are derived from sales of office supplies, with the rest coming from the sale of computers, office furniture, and other business-related

[1] U.S. Department of Justice and Federal Trade Commission, "Horizontal Merger Guidelines," reprinted in 4 *Trade Reg. Rep.* (CCH) p. 13,104 (1992, revised 1997). Also see http://www.ftc.gov/bc/docs/horizmer.htm.

items. Both chains purchase virtually all of their inventory directly from manufacturers in large quantities, enabling them to receive volume discounts that are unavailable to small and medium-sized retailers. These lower costs have led to dramatically lower prices: office supplies are typically sold by superstores at discounts of 30 to 70 percent below manufacturer-suggested retail prices.

At one time, twenty-three competing OSS chains slugged it out in the market. By the time of the proposed merger, however, OfficeMax was the only remaining close rival to Staples and Office Depot. Spun off from K-Mart in 1994, OfficeMax operated 575 superstores and seventeen delivery centers in over 220 areas in forty-eight states. Like Staples and Office Depot, each OfficeMax superstore offered an extensive selection of over 7000 items at discount prices, selling primarily to small and medium-sized businesses, home office customers, and individuals. OfficeMax's total revenues for fiscal year 1997 were $3.2 billion, with office supplies making up about 40 percent of total revenues.

The success of the OSS concept had redefined the retailing of office supplies in the United States, driving thousands of independent stationers out of business, just as the growth of supermarkets had driven out thousands of small "Mom and Pop" grocery stores. The competitive rivalry between the superstores had, however, benefited consumers substantially. Each OSS chain slashed prices; drove down costs; developed innovative approaches to marketing, distribution, and store layout; and expanded rapidly, bringing to increasing numbers of consumers the convenience of one-stop shopping at low prices. Office Depot had, at least in recent years, been the most aggressive and lowest-price competitor.

On September 4, 1996, Staples and Office Depot announced an agreement under which Staples would acquire Office Depot by exchanging 1.14 Staples shares for each outstanding Office Depot share, a roughly $4 billion deal. After a seven-month investigation, the FTC decided to challenge the merger.[2]

THE FTC'S CASE

The FTC argued that this merger could be expected to lead to a significant decrease in competition in the market for consumable office supplies sold

[2]After the Commission's initial vote, the FTC staff negotiated a tentative agreement (subject to the Commission's approval) with Staples and Office Depot that would have authorized the merger to proceed unchallenged if the two companies agreed to divest a sufficient number of stores to OfficeMax to preserve two competitors in cities where Office Depot and Staples were currently the only two superstores. On March 26, 1997, OfficeMax signed an agreement to buy sixty-three Staples and Office Depot stores for the fire-sale price of $108.75 million, subject to the consent of the FTC. But on April 4, 1997, the Commission voted to reject the proposed settlement and thus to challenge the merger.

through office superstores, and that the resulting price increases could be expected to be substantial. To prove its case, the FTC used a number of sources of data and analytical approaches to predict the price effects of the proposed merger. It argued that all of the evidence indicated that there would be large and long-lasting price increases, and therefore considerable harm to consumers.

The FTC was careful to compare the expected merger-related changes in prices and costs with the prices and costs that would have prevailed in the absence of the merger. Specifically, the FTC recognized that OSS prices might continue to fall after the merger, but argued that because prices would fall significantly further without the merger, the merger would still harm competition. Likewise, the FTC stressed that the efficiencies claimed by the defendants must be merger specific.

Concentration and the Competitive Effects of a Merger

The underlying theme of merger policy is that mergers or acquisitions should not be permitted to create, enhance, or facilitate the exercise of market power, defined as the ability profitably to maintain prices above competitive levels for a significant period of time. The *Merger Guidelines* emphasize two ways in which mergers can lead to higher prices: coordinated interaction and unilateral effects.

When only a few firms account for most of the sales of a product, those firms can sometimes exercise market power by either explicitly or implicitly coordinating their actions. Coordinated interaction is of particular concern in homogeneous product markets, where all firms must charge very similar prices. Circumstances may also permit a single firm, not a monopolist, to exercise market power through unilateral or noncoordinated conduct, that is, without the concurrence of other firms in the market or in the absence of coordinated responses by those firms. Unilateral price effects are of particular concern if the products or services are differentiated, but those supplied by the merging firms are much closer substitutes for each other than for those of other suppliers. In any case, the exercise of market power causes a transfer of wealth from buyers to sellers and a mis-allocation of resources.

Defining the Relevant Market: "Consumable Office Supplies Sold Through Office Superstores"

The FTC argued that the relevant product market was "the sale of consumable office supplies through office superstores." The FTC supported its market its market definition, in part, by introducing evidence showing that: (1) OSSs offer a distinct set of products and services; (2) OSSs regard each other as their primary competitors; (3) non-OSS retailers do not tightly constrain OSS pricing; and (4) a hypothetical merger to monopoly among all three

OSSs could be expected to result in a significant increase in their prices for consumable office supplies—an outcome that would not occur if OSSs and other stores selling office supplies were in the same product market.

1. *Office superstores offer a distinct set of products and services.* The FTC argued that OSS firms were different from other vendors of office products because they carried a broad range of consumables and maintained large amounts of stock on hand. These attributes of office superstores created a one-stop-shopping opportunity for consumers that was not provided by other retailers or mail-order suppliers of office products.

Like customers of supermarkets and department stores, customers of office supply superstores benefit from being able to buy a large number and variety of products on a single visit. The full "price" to an office superstore customer of acquiring these products is the amount paid to the store, plus the customer's noncash costs of shopping. These noncash costs include the value of the time required to visit the store, gather information about products and prices, and shop. Since each visit to a store involves a fixed cost, customers prefer to purchase a bundle of items on each visit, especially low-cost "consumable" items that need to be purchased regularly.

Customers who purchase a bundle or basket of items need to decide: (1) which store to go to and (2) what products to buy on each visit. The first decision is relevant if one is analyzing a merger among a particular class of retailers (e.g., office superstores, department stores, or supermarkets) and needs to define a market for a particular type of retailing service. The second decision is relevant if one is analyzing a merger among manufacturers of particular products sold by those retailers (e.g., binders, women's dresses, or canned tuna).

OSSs devote significant shelf space to consumable office products and maintain a large inventory to ensure the convenience of one-stop shopping for customers. Superstores carry up to 7500 items of consumable office supplies, computers and computer-related products, and office furniture. While certain non-OSS retailers (mass merchandisers, warehouse club stores, computer stores, and consumer electronics outlets) sell a number of the same products that OSSs sell, they typically stock far fewer office supply items[3] and/or carry a very limited assortment of consumable office supplies.

In court, both sides presented witnesses, exhibits, and affidavits that addressed the extent to which OSS retailers differ from non-OSS retailers of office supplies. Faced with a mass of conflicting evidence, the FTC strongly recommended that the judge visit several sellers of office supplies to see for himself how superstores differ from other office supply retailers. As one FTC expert witness put it, "One visit would be worth a thousand affidavits."

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[3]Estimates of office supply items carried by the warehouse club stores range from 100 to 289. Mass merchandisers like K-Mart and Target typically carry fewer than 570 office supply items. Even Wal-Mart, which carries a relatively broad range of office supply items (between 1067 and 2400), nonetheless did not appear to be a significant competitor of the OSS firms.

2. *OSSs regard each other as their primary competitors.* The parties' internal documents (at least those predating the merger announcement) showed that each was concerned primarily or exclusively with competition from other office superstores. Indeed, Staples defined "competitive" and "noncompetitive" markets solely in terms of the presence or absence of OSS competitors,[4] and referred to its participation in an "office superstore industry."[5] Office Depot's documents similarly focused primarily on other OSS firms as competitors. The FTC argued that such evidence demonstrated that Staples and Office Depot recognized that other OSS firms were their main competitors.

3. *Non-OSS retailers have little effect on OSSs' price changes.* The FTC argued that the presence of non-OSS retailers could be expected to have little effect on the prices charged by OSS, especially in markets where more than one OSS was present. This implied that the presence of non-OSS retailers in an area would not prevent the merged office superstore from raising prices and that such non-OSS retailers should not thus be included in the relevant market.

The FTC did not dispute the fact that, in markets defined by Staples as "noncompetitive markets" (i.e., in markets where only one OSS was present), retailers like warehouse clubs and computer stores would be the closest competitors of the OSS. But the FTC argued that one could not infer from this that non-OSS retailers would provide effective competition for OSS firms in "competitive" markets, those where two or more OSSs already were present. A monopolist maintains a price so high that any further increase would cause a sufficient loss of customers to be unprofitable. Thus, a monopolist is distinguished not by the fact that it faces no competition, but by the fact that its closest competitors are too distant to prevent it from maintaining its price at a level significantly above cost. Ultimately, however, every monopolist "creates" its own "competitors" by maintaining its own price sufficiently high.[6]

[4]For example, Staples' FY95 Marketing Plan defined competitive markets as markets with another office superstore (i.e., Office Depot or OfficeMax or both), and noncompetitive markets as those with only local stationers or warehouse clubs.

[5]Staples's internal documents further established that it viewed OSS firms to be its primary competitive constraint. A March 1996 memorandum discussing possible price increases if Staples bought OfficeMax specifically referenced only one competitor, Office Depot, as a possible price-constraining influence. In a document analyzing new store openings, under the heading "Competitive Store Additions in Staples Markets," only Office Depot and OfficeMax store openings were listed. No other entity was listed as a competitor. In a similar vein, it is clear that Staples did not view mail-order firms, independent stationers, or other nonsuperstore-format vendors of office supplies as price-constraining influences.

[6]This point has come to be known as the "cellophane fallacy" after the Supreme Court's decision in *U.S.* v. *E.I. du Pont de Nemours & Co.,* 351 U.S. 377 (1956). In that case, du Pont was accused of monopolizing the cellophane market. The Court reasoned that cellophane had many substitutes and the company's share of flexible wrapping materials did not warrant a monopoly ruling. In so doing, the Court failed to recognize that had du Pont sold cellophane at a competitive price (instead of the monopoly price) there would not have been many similarly priced substitutes.

Thus, in a market with two OSS firms, each OSS could overwhelmingly be the other's primary "competition" and provide the only effective force holding the other OSSs pricing at present levels. If these two OSSs merged, the new firm would find it profitable to raise its prices until competition from non-OSS retailers eventually made further price increases unprofitable. The post-merger OSS monopoly would then be constrained by the prices charged by these new, non-OSS "competitors." In short, even though warehouse price clubs or Wal-Mart might be important competitors to Staples in geographic markets that have no other OSS rivals, such non-OSS suppliers are not significant competitors to Staples in geographic markets where Staples faces other OSS competitors, that is, in the markets that the FTC thought were relevant to analyzing this merger.

The FTC's econometric analysis supported the conclusion that non-OSS competitors do not constrain OSS pricing in geographic markets where two or three OSS chains are present. Indeed, simulations of the effects of eliminating individual non-OSS retailers from such markets showed that none of those retailers (except Best Buy, which had tried and failed to implement an OSS-type format, and had effectively exited by the time of the merger) had any statistically significant effect on Staples' prices.

Further evidence of differences between OSS firms and other office supplies retailers involved price differences. In general, suppliers that compete in the same market have similar prices for the same products. If consumers can easily switch among suppliers, higher prices, adjusted for quality, will not be sustainable.[7] The FTC presented evidence that office superstores in the same geographic market tend to price office products at the same level, just as warehouse clubs in the same geographic market tend to price office products at the same level. However, prices for office products in the same geographic market often differ significantly between OSS firms as a group and warehouse clubs as a group.[8]

4. *Econometric evidence supported an OSS product market.* Under the *Merger Guidelines,* the relevant product market in this case turned on the following question: Would a merger to monopoly among the OSS chains in a city allow the merged entity to raise the prices of consumable office supplies by 5 percent or more? If the answer is yes, then "office supplies sold through office superstores" is a relevant market under the *Guidelines.*

The FTC addressed this question by constructing a large-scale econometric model of prices for office supplies. The analysis was designed to de-

[7]When consumers are deciding among stores where they can purchase a group or bundle of products, competing stores in the same market would be expected to show a very similar price index for a representative basket of products, without necessarily showing very similar prices on individual items.

[8]A Prudential Securities survey reported that in Detroit all three OSS firms had virtually identical prices for the basket of office supplies sampled (total prices differed by from 0.4% to 2.0%). In contrast, the price of a basket of items common to any of the three OSS firms and to Best Buy was 18% to 19% higher at Best Buy (Prudential Securities, 1995, pp. 64, 67).

termine how Staples' prices varied from one store to another as a function of the number of nearby Office Depot or OfficeMax stores, the number and identity of potential nonsuperstore rivals such as discount mass merchandisers or warehouse club stores, and differences in costs and demand conditions across local markets. The FTC had weekly data from the parties, for over eighteen months, covering more than 400 Staples stores in more than forty cities. The data included prices for a large number of individual stock-keeping units (SKUs) as well as a price index for consumable office supplies.

The FTC's analysis predicted that a merger to monopoly in markets where all three OSS firms were present would raise the price for office supplies sold through OSSs in those markets by 8.49 percent. Such an increase would not be possible if OSS firms were constrained by other retailers. These results confirmed that "consumable office supplies sold through office superstores" was a relevant market under the *Guidelines* criteria.

The Merger's Likely Anticompetitive Consequences

The FTC argued that voluminous evidence—structural, documentary, and statistical—all supported the conclusion that the combined Staples/Office Depot entity would raise prices for office supplies. As to the structural evidence, a merger between the OSS firms in a hypothetical market with many OSS chains would not necessarily have any anticompetitive effect, because the merged firm would still have many close competitors. As we have seen, however, only three OSS chains compete anywhere in the United States. Therefore, OSS market concentration would increase significantly in all local markets in which both Staples and Office Depot were present as the number of OSS competitors fell from either three to two or from two to one. The companies' own documents indicated that Office Depot was the main constraint on Staples' prices[9] and that, but for the merger, Staples planned to cut prices significantly over the next few years in response to current and future competitive pressures from Office Depot. The proposed merger would eliminate these pressures.[10] Finally, statistical analyses of the potential effects of this transaction predicted that, absent efficiencies, the merger could be expected to lead to large price increases. In addition, data from financial markets indicated that investors implicitly believed the merger would lead to significantly higher prices even after allowing for the effects of any efficiencies.

[9]The CEO of Staples, Tom Stemberg, testified to this point by arguing that, "Office Depot is our best competitor" and "our biggest competitor." Stemberg described that this "best" and "biggest" competitor posed a more severe pricing constraint upon Staples than did the third office supply superstore chain, OfficeMax.

[10]In fact, in anticipation of the merger, Staples canceled a 3% price cut on nonpaper supply items.

Structural Evidence: The Change in Concentration and Market Power

The structural effect of the proposed merger would have been to reduce from three to two the number of suppliers in markets where all three OSS firms would otherwise have competed and to create a monopoly in markets where only Staples and Office Depot currently competed, at least until entry by OfficeMax could reasonably be expected.

Table 2-1 shows Staples management's estimate for the percentage of Staples stores located in "Staples-only," "Staples and Office Depot," and "Staples, Office Depot, and OfficeMax" markets in 1995 and their projection for the year 2000. Absent the merger, Staples management anticipated a significant increase in competition from Office Depot and OfficeMax, as indicated by its projection that by 2000 markets with all three chains would account for 69 percent of Staples stores, up from 17 percent in 1995.

Therefore, the eventual effect of the merger would be to reduce the number of competitors from three to two in most geographic markets and from two to one in all but a few of the remaining geographic markets. (A small number of markets still would have only one OSS by 2000 even in the absence of the merger.)

Empirical Evidence Pointing to Likely Price Increases

In almost all merger cases before *Staples,* the DOJ or FTC relied primarily, if not exclusively, on indirect structural evidence of the kind presented above to infer that a significant price increase could be expected from that merger. *Staples* is unique, however, in terms of the large number of independent sources of strong, consistent, and direct evidence that were introduced at trial to show that prices would likely increase as a result of their merger. Five of these sources are discussed below.

Predictions of Staples' Management: Staples' own documents showed that, absent this merger, Staples' management expected that wider competition would force it to lower prices and/or raise quality. Its *1996 Strategy Update,* part of the FTC's trial evidence, forecasted that the per-

TABLE 2-1
Percentage of Staples Stores in Staples-Only Markets, Two-OSS Markets, and Three-OSS Markets

Year	Staples Only	Staples & Office Depot	Staples & OfficeMax	All Three	Total
1995	17%	29%	37%	17%	100%
2000	12%	7%	12%	69%	100%

Source: Plaintiff's Exhibit 15, p. 32.

centage of three-player markets would increase to nearly 70 percent by the year 2000. It went on to predict that this could intensify the pressure on Staples' prices and also lead to greater operating expenses as a result of a higher service quality and higher marketing expenditures.

Staples also predicted that, absent the merger, its retail margins, averaged over its entire sales (i.e., arranged not just over consumable office supplies and not just over markets where it faced competition from Office Depot) would decline by 150 basis points ("bps"), or 1.50 percentage points, by the year 2000 as a result of increased competitive pressure (ibid., p. 66). Of that margin fall, 60 bps would come from markets where Staples competed only with Office Depot and reflected Staples goal (absent the merger) to eliminate the price differences on nonpaper supply items between Staples and Office Depot.

Direct Comparisons of Prices Across Local Markets: Statistical data generated during the ordinary course of business by the companies showed that, on average, both Staples and Office Depot priced significantly lower when they confronted each other in local markets.[11] As shown in Table 2-2, Staples' office supplies prices were 11.6 percent lower in markets occupied by Staples and Office Depot than in Staples-only markets; they were 4.9 percent lower in markets with all three OSSs than in markets where Staples faced only OfficeMax. Competition between Staples and Office Depot also had a significant restraining effect on Office Depot prices. These data could be used to infer the likely increases in prices after the merger (on the assumption that Staples' price patterns would dominate): +11.6 percent for the markets where premerger there was a Staples-Office Depot duopoly (accounting for 29% of Staples' stores); and +4.9 percent for the markets where premerger all three OSSs were present (accounting for 17% of Staples' stores).

Estimates from Econometric Analysis: The FTC performed an econometric analysis using store-level price data to estimate how prices differed across markets depending on the number and identity of firms in a market.[12] In essence, this econometric analysis was a more formal and

[11]In court, the FTC presented a particularly striking example of these price differentials: matching full-page color advertisements that appeared on the same day in two Florida cities, Orlando and Leesburg. Every detail was identical except the prices, which were 30 percent to 114 percent higher in Leesburg (with Office Depot only) than in Orlando (with three OSSs). This natural experiment provided the clearest evidence of both the existence of an OSS market and the likely effect of the merger on prices. To see a copy of the exhibit, go to http://dalkir.tripod.com/depotad/index.html.

[12]The statistical analysis was based on a large sample of store-level price data, drawn from 428 Staples stores in the United States over the twenty-three-month period from February 1995 to December 1996. The model examined statistically how Staples' prices varied with the extent of OSS competition, the presence of non-OSS firms (such as Wal-Mart, K-Mart, Target, and Best Buy), and potentially location-specific cost and demographic variables. See Baker (1999) and Ashenfelter et al. (2002) for an extensive discussion of the econometric studies that examined the extent of localized competition between the merging firms. For on-line articles discussing econometric as well as other aspects of *Staples,* go to http://www.antitrust.org/cases/merger.htm.

TABLE 2-2
Average Price Differentials for Office Superstore Products, Differing Market Structures

Benchmark OSS Market Structure	Comparison OSS Market Structure	Price Reduction
Staples only	Staples + Office Depot	11.6%
Staples + OfficeMax	Staples + OfficeMax + Office Depot	4.9%
Office Depot only	Office Depot + Staples	8.6%
Office Depot + OfficeMax	Office Depot + OfficeMax + Staples	2.5%

complete analysis of the kind of data just discussed. Using these estimates, the FTC calculated the overall price effects of the proposed merger: an average of 7.3 percent for the two- and three-firm markets where the merger partners were both present.

Estimates from the Prudential Study: A Prudential Securities (1996) study reported the results of a pricing survey that compared prices for office supplies at office superstores in Totowa, New Jersey, a three-player market, and in Paramus, New Jersey, a nearby (25-minute drive) two-player market (Staples and OfficeMax). The survey showed that prices, especially on visible general office supply products, were more competitive in three-player markets than in two-player markets. In particular, the survey found that Staples' prices on a basket of general office supplies that included the most visible items on which the office supply superstores typically offer attractive prices were 5.8 percent lower in three-player Totowa than in two-player Paramus.

Estimates from a Stock-Market Event-Probability Study: Financial market investors vote with their dollars (or bet) on whether a merger will raise or lower prices. A merger that raises market prices will benefit both the merging parties and their rivals and thus raise the prices for all their shares. Conversely, suppose the financial community expects the efficiencies from a merger to be so large that the merged firm will drive down market prices. In this case, the share values of the merging firms' rivals would fall when the probability of the merger goes up. Thus, evidence from financial markets can be used to predict market price effects when significant merger-related efficiencies are alleged.

The authors analyzed the effect of the proposed merger on share prices and concluded that, if consummated, the merger would raise the value of OfficeMax's shares by 12 percent (or $200 million) but would have little or no effect on the share values of other retailers of office supplies; see Warren-Boulton and Dalkir (2001). These findings confirmed both that the

merger would have anticompetitive price effects and that the OSSs constituted a relevant market.

Entry

Potential Entry of Other OSS Firms Did not Constrain the Incumbents

The FTC argued that the threat of entry by a new OSS supplier would not prevent the merger from raising prices until such entry actually occurred. A potential entrant would assess the profitability of entry on the basis of what it expected prices to be after its entry, not before. Therefore, as long as incumbents could adjust their prices rapidly in response to entry, pre-entry prices would be irrelevant to the entry decision. And, since incumbents could not deter entry by keeping prices below the pre-entry profit-maximizing level, the best pricing strategy would be to "make hay while the sun shines." In other words, "investing" in entry deterrence by maintaining low prices was not a profitable strategy for incumbents.

Under certain conditions, however, potential competition can affect the prices of the incumbents. Usually, this requires both low sunk costs of entry and an inability on the part of incumbents to reduce their prices rapidly in response to entry.[13] These conditions, however, were not present in the OSS industry. To the contrary, a significant share of entry costs into a local area was sunk costs, and incumbents could adjust their prices quite rapidly in response to entry. Therefore, prices of office superstore products could not be affected by potential entry.

This conclusion was supported by evidence in the documents. (For example, according to Thomas Stemberg, the CEO of Staples, Staples had not changed its prices in anticipation of entry by rivals.) The documents also showed that, when Staples considered entering a local market, it did not look at the prices in that market, but rather at the number of competitors.

Significant Barriers to Entry

While an individual office superstore could take advantage of store-level economies of scale and scope, a chain of superstores could also take advantage of economies of multistore operation. The latter economies appeared at different levels for different functions. Economies of scale in advertising, for example, clearly appeared at the local and regional levels. Thus, Staples' strategy for entry into a large urban market consisted of first establishing a number of stores in the periphery and advertising only in

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[13]If sunk costs are low (or firms are able to enter into long-term contracts with customers before actually entering) and incumbent suppliers are not able to change their prices quickly in response to entry, then the incumbents may not wish to encourage entry or to risk a significant loss of market share if entry occurs by maintaining high pre-entry prices.

local suburban papers until a critical mass was reached sufficient to make advertising in the large metropolitan newspaper or on television economical. For major markets, this implied a critical, minimum efficient scale of operation (a minimum number of stores) at the local level, with economies of scale for multistore operation that could extend into the regional level. The effect of such economies of scale on entry was described by Stemberg (1996, p. 59):

> By building these networks [of stores] in these big markets like New York and Boston, we have kept competitors out for a very, very long period of time. Office Depot only came to metro New York in late 1995. They're not in New York with any meaningful presence, they're not in Boston, and they're not in Philadelphia or anywhere in between. One of the reasons is that we have a very, very good network and it's really tough to steal the customer from a direct competitor when you don't have the economies of advertising leverage.

Stemberg's description of Staples' strategy to deter entry in its home base was similar: "Staples was trying to build a critical mass of stores in the Northeast to shut out competitors and make it cost-effective to advertise in the region's high-cost media" (p. 61).

Some economies of scale in advertising even extend to the national level, perhaps due to a better ability to use network television advertising. Such economies give Staples a stronger incentive to enter markets where Office Depot and OfficeMax are already present, since this reduces advertising costs per dollar of revenues for Staples by increasing the total number of stores and the sales over which such costs can be spread.

All three OSS chains assess prospective new markets in terms of the existing numbers of OSS firms and the demand for additional OSS locations. Markets that have little or no "room" for additional stores are said to be "saturated."[14] Because multiple-store entry is typically necessary to enter a given metropolitan market, markets that are already saturated or nearly saturated are difficult to enter. An Office Depot document listed every market (as defined by Office Depot) in the United States and gave the total number of existing Office Depot, Staples, and OfficeMax stores, as well as estimates of the total number of OSS locations each area could support. The Office Depot estimates implied that, in many major markets in the United States today, there is insufficient demand for new office supply superstores to allow an entrant to achieve competitive-scale economies. In short, the time has passed for a new chain to enter by building a significant number of stores in a new market without creating a glut of superstore ca-

[14]The parties defined "store potential" as the maximum number of OSS firms that can be supported in a given market, given existing market conditions, and defined the ratio of the number of OSS firms in a market to store potential as the degree of "market saturation."

pacity or locations. Thus, a firm currently attempting to enter cannot do so under the profitable conditions that the three incumbents faced in the past.

Efficiencies Were Not Sufficient to Offset Price Increases

The FTC argued that the efficiency claims made by the merger parties were exaggerated for several reasons. First, only efficiencies that are merger specific should be credited; that is, efficiencies likely to be achieved absent a proposed merger are irrelevant to the analysis of that merger. In this case, much of the anticipated efficiency gains were the result of the merged firm's increased scale. This in turn raised several questions: (1) Given the rate at which the parties were growing independently, many scale-related efficiencies could be expected in a short time through internal growth. (2) Achieving economies of scale in procurement does not require the expansion in retail operations that a merger would bring. Procurement cost reductions can be achieved by expanding sales through mail order or contract stationer operations, and both Office Depot and Staples had expanded such operations before their merger announcement. Thus, even if the parties had presented evidence to show that past expansions had lowered procurement costs, this would not have established that the claimed efficiencies were merger-specific. (3) Scale economies seldom continue indefinitely. Thus, particularly in the case of procurement costs, Staples and Office Depot may already be large enough to achieve the maximum sustainable price discounts that their suppliers can offer.

The second reason for the FTC's skepticism as to the parties' efficiency claims was the lack of support by reliable evidence. In particular, the efficiency claims made by the parties increased dramatically between the time that the deal was first approved by the Staples' board and the time that the parties submitted an efficiencies analysis to the FTC. Because it was not clear what new information or insights the parties gained in that time period, there was a strong presumption that the substantially lower cost-saving estimates first presented to the Staples board were more reliable.

Third, under the *Guidelines,* efficiency gains are relevant only insofar as they result in a lower price to consumers. The share of any cost reductions that is passed on by a profit-maximizing firm increases with the proportion of those cost reductions that is attributable to variable (rather than fixed) costs; with the competitiveness of the industry; and with the share of firms in the market to which the cost reductions apply. In this case, the proposed merger would have substantially reduced competition. Further, any cost savings would have been limited to the merged firm. Therefore, historical estimates of the share of cost savings that the parties had passed on to consumers would significantly overstate the share of any merger-specific cost savings that would be passed on.

Specifically, the FTC's analysis showed that the merger would bring true efficiencies that were the equivalent of only 1.4 percent of sales and

that only a seventh of these cost savings would be passed through to consumers. Thus, the net price effect of the merger would be substantial: the 7.3-percent price increase predicted by the FTC's econometric model of pricing, less an efficiency pass-through of 0.2 percent (= 1.4% × 0.15), for a net increase of 7.1 percent.

THE DEFENDANTS' ARGUMENTS

Staples and Office Depot argued that the merger would not have anticompetitive consequences. Their defense focused on two main arguments: (1) the FTC's product market definition was erroneous; and (2) regardless of the market definition, the efficiencies from the merger, ease of entry into OSS retailing, and the defendants' track record of lowering prices after their past acquisitions of other OSS firms all indicated that the merger would not raise prices.[15] Either of these two arguments, if accepted, would have disproved the FTC's argument that the proposed merger would lead to a substantial lessening of competition in the relevant antitrust market.

Market Definition

The defense vigorously challenged the FTC's claim that OSS firms constituted a relevant market for antitrust purposes. Staples and Office Depot argued that the FTC's market definition was based exclusively on the *identity* of the seller and not on the *characteristics* of the product or service supplied by sellers. The respondents claimed that OSS firms were part of a broad market for retailing office supplies in which they held a low share. An OSS firm was constrained in its pricing not just by other OSS firms, but by all office product retailers.

The defendants argued that a retail product market is defined by the nature of the product being retailed; since office supplies sold by an OSS are not different from those sold by other retailers, both types of retailers are in the same market. The fact that OSS chains use different retail formats implies that they have found a particularly good way of competing with other retailers and does not imply that other retailers are in a different market. Thus, the defendants rejected the notion that office superstores supply a distinct bundle of goods and retail services that would enable a monopoly OSS to raise OSS prices.

The defendants also rejected the FTC's argument that Staples' and Office Depot's own documents define OSS firms as "the competition" and

[15]The defense cited two past acquisitions as examples of the two companies' record of lowering their prices after a merger. According to the defense, the price of office supplies had fallen in each of the respective areas after Office Depot's acquisition of Office Club in Dallas, Texas, and Staples' acquisition of HQ Office Supplies Warehouse in Los Angeles, California (both in 1991).

"the market." Citing a previous court decision, they argued that the term "market" does not necessarily mean the same thing to a company and to an antitrust agency. Further, they contested the FTC's use of selected passages in Staples and Office Depot documents as evidence in this regard: they claimed that other passages in the same documents used the term "market" also to include non-OSS firms. The defendants submitted exhibits showing that each regularly checked the prices of non-OSS firms, such as Wal-Mart, Viking, Best Buy, and Comp USA, along with the prices of other OSS firms. According to the defense, this illustrated the intense competition between OSS and non-OSS firms. As another illustration, the defense submitted a study that showed that the sales of a Staples store would fall by 1.4 percent with the opening of a new computer superstore, 2.4 percent with a new Wal-Mart, 3.7 percent with a new warehouse club, and 7.2 percent with a new Best Buy.

Efficiencies and the Net Price Effect

The defense claimed that OSS firms were founded on the principle of providing low prices through large sales volume. Thus, the defendants argued, the merger would increase the total volume of their (combined) purchases and lower the prices that they paid to manufacturers of office supplies. They also claimed that the merger would lower administrative, marketing, advertising, and distribution costs. Under the defense's assumption that the merged entity would pass on to consumers two-thirds of the cost reductions, Staples and Office Depot would be able to cut prices significantly after the merger.

The defendants disputed the FTC's argument that much of their claimed efficiencies could be achieved absent the merger. Moreover, they argued, even if some of those efficiencies could eventually be achieved through internal expansion, a merger would allow those efficiencies to be achieved much faster.

The defendants submitted an econometric study that suggested that Office Depot had a relatively small effect on Staples' pricing and that a merger between the two would (absent efficiencies) increase prices for consumable office supplies by only 2.4 percent (compared with the FTC's estimate of 7.3 percent) at Staples stores in markets with both Staples and Office Depot present, by 1.3 percent when averaged over office supplies at all Staples stores, or by 0.8 percent when averaged over all products and all Staples stores. The defendants also argued that, based on their estimate of cost savings and of the proportion that would be passed through to consumers (0.67 versus the FTC's estimate of 0.15), the efficiency gains alone would cause prices to be lower by 3 percent over all Staples' products and stores. Thus, the net effect of the merger would be to *reduce* the prices faced by the average Staples customer by 2.2 percent ($0.8 - 3.0\% = -2.2\%$).

No Barriers to Entry and Ease of Expansion

The defendants argued that entry into the office supplies business was easy. Stores could be constructed within months, and sunk costs were low because the product did not decay and there were no fashion crazes.[16] In addition, OfficeMax had increased its planned new store openings in 1997, demonstrating ease of expansion by existing competitors. Finally, entry or expansion did not necessarily entail costly new store openings: existing multiproduct retailers could enter, or expand into, the office supplies business by increasing the share of the shelf space they allocated to office supply items.[17]

Public and Private Equities

The defense argued that blocking the merger would impose losses on both consumers and shareholders. The main consumer benefits from the merger that would be lost were the claimed efficiencies and lower prices discussed above; in addition, the combined company would be able to expand faster than either could individually, creating value for customers and for the U.S. economy. Any cost savings not passed on to consumers would benefit the shareholders of Staples and Office Depot. Finally, the defense argued that there was no need for a temporary restraining order or a preliminary injunction to stop the merger because the merger was reversible. If post-merger evidence demonstrated an anticompetitive effect, the merged entity could always be split back into two separate companies.

JUDGE HOGAN'S DECISION

The court agreed with the FTC and granted a preliminary injunction. Judge Thomas F. Hogan first noted that the law required the FTC to show only a reasonable probability of harm to competition to obtain a preliminary injunction. In his decision, Judge Hogan defined the relevant product market as the OSS submarket and found that Staples and Office Depot would have a "dominant market share" (between 45 percent and 100 percent) in many geographic markets after the merger. He also concluded that FTC's pricing evidence demonstrated a reasonable likelihood of anticompetitive effects.

The judge noted that neither the public nor the private equities claimed by the defendants were sufficient to offset the likely anticompetitive effects.[18]

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[16]Two examples offered to demonstrate the ease of entry were U.S. Office Products Co. and Corporate Express. Office Products had been founded recently (in 1994); both firms had expanded rapidly by acquiring small local dealers; their sales had also increased fast within the past few years.

[17]The defense's example was that Wal-Mart had already started expanding the shelf space it allocates to office products.

[18]The court stated that unscrambling the eggs, that is, undoing the merger if definitive anticompet-

The Product Market

The court found that the sale of consumable office supplies by office superstores was a submarket within a larger market of all office supply retailers.[19] Baker (1997) discusses the judge's opinion on the product market in light of the April 8, 1997, revised *Merger Guidelines* and concludes that the court's "hidden opinion" treats the submarket argument as "a legal hook for reaching unilateral competitive effects from a merger among the sellers of close substitutes."

Judge Hogan recognized that it was difficult to overcome the "initial gut reaction" to the definition of the product market as the sale of consumable office supplies through office superstores. Since the products sold by OSS firms are the same as the products sold by non-OSS retailers, "it is logical" to conclude that all these retailers compete. However, he noted, a firm could be a competitor in the "overall marketplace" without also being included in the relevant antitrust market.[20] He found plausible the FTC's argument that a small but significant increase in one superstore's prices would not cause a large number of its customers to switch to non-OSS retailers; instead, those customers would turn primarily to another OSS.[21]

The judge observed that office superstores were very different from other office supply retailers in terms of appearance, size, format, the number and variety of items offered, and the type of customers targeted. While it was "difficult fully to articulate and explain all of the ways in which superstores are unique," he found that: "No one entering a Wal-Mart would mistake it for an office superstore. No one entering Staples or Office Depot

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itive effects were to be found in the future, was not a realistic option in this case. In addition to the difficulties involved in subsequently separating the merger partners, consumers would face the risk of being harmed if the merger was to be let through, and that damage could never be repaired by undoing the merger. *Federal Trade Commission* v. *Staples, Inc.,* No. 97-701 (1997).

[19]In reference to submarkets within a market, the court decision cited the Supreme Court in *Brown Shoe:* Well-defined submarkets may exist that, in themselves, constitute product markets for antitrust purposes, and it is necessary to examine the effects of a merger in each such economically significant submarket to determine if there is a reasonable probability that the merger will substantially lessen competition. *Brown Shoe* defined several practical indicia to determine the presence of a submarket within a broader market, which Judge Hogan used to determine whether OSS chains constitute a submarket. See *Brown Shoe* v. *United States,* 370 U.S. 294 (1962).

[20]The court cited the notion of functional interchangeability in *Du Pont* (referring to interchangeability between cellophane and other wrapping materials) and *Archer-Daniels-Midland* (referring to interchangeability between sugar and corn syrup) cases. Noting that the *Staples* case is an example of perfect functional interchangeability in the sense that a legal pad sold by Staples or Office Depot is functionally interchangeable with a legal pad sold by Wal-Mart, it recognized that the analysis should go further and look at the cross-elasticity of demand between products, again citing the *Du Pont* case. See *U.S.* v. *E. I. Du Pont de Nemours and Co.,* 351 U.S., 377 (1956); and *U.S.* v. *Archer-Daniels-Midland Co.,* 866 F.2d 242 (1988).

[21]The court did note some limitations of the data underlying the FTC's individual analyses, and it further noted that the FTC could be criticized for looking at only brief snapshots in time or for considering only a limited number of items, but it concluded that taken together, there was sufficient evidence for a low cross-elasticity of demand between the consumable office supplies sold by the superstores and those sold by other retailers.

would mistakenly think he or she was in Best Buy or CompUSA. You certainly know an office superstore when you see one."[22] He argued that this is one practical indication for the OSS firms' constituting a submarket within a larger market.

Another practical indication for determining the presence of a submarket was "the industry or public recognition of the submarket as a separate economic entity." The judge found that the FTC had offered "abundant evidence" from the merging companies' internal documents that they evaluated their competition as other OSS firms and interacted with other OSS firms in making long-term plans. While Staples and Office Depot did not completely ignore non-OSS retailers, there was sufficient evidence that showed that Staples and Office Depot consider other OSS firms as their main competition.

Likely Effect on Competition

The judge was convinced that the proposed merger would likely have anticompetitive effects. He reached this conclusion from two pieces of evidence. First, having accepted the FTC's product market definition, he found the concentration statistics to be a source of serious concern.[23] After the merger, a combined Staples-Office Depot entity would have a dominant market share in many local geographic markets.[24]

Second, the pricing evidence showed that an OSS was likely to raise its prices when it faced less competition from other OSS firms. Furthermore, without the merger, Staples and Office Depot would probably enter into each other's markets and reduce prices. The merger would mean that these future benefits from increased competition would never be realized.

Entry

In a market defined as office supplies sold through superstores, the court focused on the entry of new OSS firms, not just any office products retailer. To achieve economies of scale and be profitable, a new OSS would have to open many stores and incur high sunk costs. Further, an entrant could not easily achieve economies of scale at the local level because many of the OSS markets were already saturated by existing OSS firms. The judge

[22]*Federal Trade Commission* v. *Staples, Inc.,* No. 97-701 (1997).

[23]The pre-merger Herfindahl-Hirschman Index for the least concentrated market, Grand Rapids-Muskegon-Holland, Michigan, was close to 3600, whereas for the most concentrated market, Washington, D.C., the pre-merger HHI was about 7000.

[24]The combined market share would be 100% in fifteen metropolitan areas. In addition, in twenty-seven other metropolitan areas where the number of OSS firms would drop from three to two, the combined Staples-Office Depot market share would be above 45%. The HHI would rise on average by 2715 points because of the merger.

found it extremely unlikely that a new OSS would enter the market and counterbalance the anticompetitive effects of the merger.[25]

Efficiencies

The judge noted that under the law it is unclear whether efficiencies constitute a viable defense. He stated that even if efficiencies can provide a legal defense in principle, in this case the defendants had not shown efficiencies sufficient to refute the FTC's presumption of anticompetitive effects from the merger. He found that the defense's estimates of the efficiencies were unreliable, unverified, and unrealistic. Among other problems, the defendants did not distinguish between merger-specific and other kinds of efficiencies, and given Staples' historical pass-through rates their assumption that two-thirds of the cost savings would be passed through to the customers was unrealistic.[26]

CONCLUSION AND AFTERMATH

The FTC's victory in *Staples* came as a surprise to many observers. The casual empirical facts—there were many retailers of office supplies, and Staples and Office Depot together accounted for only a small percentage of the aggregate sales of such products—seemed determinative.

But the FTC's careful marshalling of the data—especially, its use of the price data to show that the office superstores were a separate market—proved important in convincing the Commission itself and then Judge Hogan that the merger would be anticompetitive. It seems likely that these kinds of data, which have become readily available from the scanner technology that has become common in retailing, will become increasingly important in the legal judgments related to mergers involving retailers or manufacturers of goods that are sold primarily at retail.

Since *Staples,* both the agencies and merger applicants have routinely used direct evidence on the closeness of merging competitors and the expected size of a merger's price effects, in defining the relevant product market and/or predicting the effect of the merger on consumers' welfare.[27]

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[25]As for the expansion of non-OSS suppliers into the OSS markets, the judge noted that it was unlikely that they would undo the merger's anticompetitive effects. Specifically, the expansions by U.S. Office Products and Wal-Mart would be unlikely to constrain a potential increase in the prices of the merged entity. In relation to the defense's argument that existing retailers could simply expand into the office products business by reallocating shelf space, the judge reasoned that while these retailers certainly had the power to do so, there was no evidence that they in fact would, following a 5% (small but significant) increase in the prices of the merged entity.

[26]Historically, Staples passed through 15–17% of its cost savings to customers, as estimated by the FTC's econometric analysis. For a discussion of the FTC's estimation of the extent to which the merged firm would pass on cost savings from the acquisition to buyers, see Baker (1999).

[27]One such case, *FTC* v. *H.J. Heinz Co. and Milnot Holding Co.* ("baby food case"), is the subject of Case 6 by Jonathan B. Baker in this part. The FTC has also used scanner data in a similar way to

In *Staples,* much of the efficiencies argument of the defendants was based on scale economies. Within three years following the merger's abandonment, Staples and Office Depot each achieved the size (about 1000 stores) that they would have achieved as a single firm had the merger been approved (Balto 1999). As the parties' premerger strategy documents had forecast, many of the new stores were in the overlap markets.[28] Thus, most of the efficiencies that the parties could have expected from the merger were achieved without much delay and without the detrimental price effects from a merger.

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evaluate supermarket mergers (see "A Blue Light Special for Mergers?" *The Deal,* October 5, 1999). The availability of scanner data has created a virtual "cottage industry" for econometricians predicting merger effects, either by estimating reduced-form equations as in *Staples,* or by a two-step process where demand elasticities are first estimated and then become inputs into a merger simulation model (see Werden 2002 and more generally http://www.antitrust.org/simulation/simulation.html); this is an approach that has become so successful that it has created its own backlash (see Muris 2001).

[28]Staples Annual Report 2000.