Competition Challenges in the Supermarket Sector with an Application to Latin American Markets

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Assignment

This white paper details competition challenges in the supermarket sector, drawing on cases and experiences from around the world, including the U.S., U.K., Australia, Germany, Mexico, Chile, Colombia, Argentina, and other countries. The white paper has been prepared for the Regional Competition Center for Latin America under the World Bank–Bank-Netherlands Partnership Program "Strengthening competition policy in Latin American Countries." Participating competition agencies and ministries are:

- Argentina: Comisión Nacional de Defensa de la Competencia (CNDC)
- Chile:
  - Tribunal de Defensa de la Libre Competencia (TDLC)
  - Fiscalía Nacional Económica (FNE)
- Colombia: Superintendencia de Industria y Comercio (SIC)
- Costa Rica: Comisión para Promover la Competencia (COPROCOM)
- Dominican Republic: Comisión Nacional de Defensa de la Competencia de República Dominicana (CNDC)
- Ecuador: Ministerio de Industrias y Productividad
- El Salvador: Superintendencia de Competencia
- Guatemala: Viceministerio de Inversión y Competencia
- Honduras: Comisión para la Defensa y Promoción de la Competencia (CDPC)
- México: Comisión Federal de Competencia de México (CFC)
- Nicaragua: Instituto Nacional de Promoción de la Competencia de Nicaragua
- Perú: Instituto Nacional de Defensa de la Competencia y de la Protección de la Propiedad Intelectual (Indecopi)

The nature of both competition law and the supermarket sector in these countries is dynamic so that, although this white paper makes every effort to provide up-to-date information, details regarding laws, regulations, and specific firms are subject to change and may no longer be accurate.

Chapter 1: Unique Features of the Supermarket Sector

Supermarkets are large stores that sell a wide variety of food items and other groceries, such as cleaning supplies, pharmaceuticals, and other miscellaneous merchandise. Larger stores may also sell household items, apparel, health and beauty items, and other products.

Several features distinguish the supermarket sector from other sectors of the economy.

First and most important is the universal nature of the demand for food. With very few exceptions — generally extremely rural populations that do not have access to markets and consume a very limited variety of food items — everyone shops for food. The same is not true for other products, which are either not consumed universally (as in the case of books, toys, or electronic equipment) or can be produced at home (e.g., clothing). Because of the universality of food shopping, virtually all consumers are affected by the nature of competitive behavior in the sector. The universal nature of food consumption has also created unique regulations in many countries related to food safety.

Second, the vast majority of consumers who visit a supermarket do not buy a single item or two but rather a basket of food items, which changes from visit to visit. Supermarkets provide not simply a set of a goods but a service: the arrangement of a large number of products available for sale together in a convenient setting and location, with emphasis on quality, service, one-stop shopping ability, and an overall shopping experience. The nature of this service is that it is highly differentiated, and no two supermarkets provide the same combination of location, prices, selection, quality, and other amenities, all of which affect consumers' choices. Both differentiation of stores and the mix of products in one's basket matter for a consumer's choice of supermarket. These factors complicate competition

analysis because different consumers treat different stores, at different times, as either close or distant substitutes to one another. Market definition, the first step in many competition investigations, becomes ambiguous in this setting. In addition, supermarkets' large array of products for sale has created complex pricing schemes.

Third, the sector is relatively unique because food products tend to be perishable, with implications for both the organization of firms and the shopping behavior of consumers. For consumers, the perishability of items means two things: they shop for food often and they shop locally. The latter means that much of the competition between supermarkets occurs at a very local level, because most consumers do not travel more than a few kilometers to buy their food. Barriers to entry at this very local level can affect competition even if national markets are generally competitive. Consequently, both mergers and anti-competitive conduct by supermarkets can negatively affect subsets of consumers in specific geographic markets.

For firms, the perishable nature of their product means that inventory control is of central importance. Supermarkets make much larger investments than other types of retailers in logistics, distribution, and inventory maintenance. This includes refrigeration (often with back-up generators) of stores, distribution centers, and trucks. Power outages and disruptions to supply routes can have devastating effects on a supermarket's costs. The investments in logistics and other technologies have made supermarkets into some of the largest, most technologically advanced, retailers in the world, and may create barriers to entry to smaller operators that cannot make these large investments. At the same time, the very local nature of competition, combined with the differentiation inherent in this sector, has left opportunities for smaller stores to compete in local markets against large chains.

While unique in many ways, supermarkets also share many features with some other sectors such as retail pharmacies, gasoline stations, and some other sectors that have "big-box" type retailing. While this white paper focuses on supermarkets' special features, it also incorporates lessons that cross these sector boundaries using cases from other sectors that are relevant to the supermarket sector.

Chapter 2: Sector Background

2.1 Formats of Food Retailers

Supermarkets are so called because they tend to be large, often with 600 square meters or more of sales area, and carry as many as 20,000 to 25,000 unique products or stock-keeping units (SKUs). The U.S.-based Food Marketing Institute estimates that the median U.S. supermarket has floor space of 4,300 square meters (calculated from Food Marketing Institute, 2012). Varela (2012) reports supermarkets in Mexico range in size from 700 to 3,500 square meters.

Some supermarkets are even larger. Combination grocery-and-general-merchandise stores, known as hypermarkets or supercenters, have floor spaces as large as 19,000 square meters, as much as 40% of which may be devoted to groceries.

Club stores (also known as warehouse clubs or membership clubs) carry a wide selection of food and other items and sell in bulk at a discount over traditional retailers to shoppers who pay an annual membership fee.

On a smaller scale, there are also specialty food stores of various types. Some specialists, like butchers, fishmongers, or greengrocers, sell only one type of product. Others, such as high-end stores specializing in premium, natural, and organic products, and low-end, no-frills, limited-assortment stores, sell a wider variety of products but still fall short of a full line of groceries.

Finally, there are many small neighborhood stores and convenience stores that sell a limited number of grocery products, often with an emphasis on snack and impulse-purchase items. These stores remain important to consumers, though their numbers have declined over time in many countries with the advance of supermarket and hypermarket chains.

Some supermarket chains operate under a single brand of store while others manage multiple brands or banners. Different brands under the same ownership may sell different assortments of products, and provide different quality levels.

2.2 One-Stop Shopping and Economies of Scale and Scope

2.2.1 Economies of Scale and Scope

Economies of scale and scope give larger supermarket chains an advantage, allowing them to exploit advances in logistics and operations technologies.

Economies of scale refer to the reduction in average costs achieved by selling a higher overall quantity, and exist at both the store level and the chain level.

At the store level, large supermarkets and hypermarkets are cheaper to supply on a per-unit basis. A large supermarket can be supplied by a full truck on a single delivery, but supplying smaller stores with partial loads requires additional travel, multiple stops, and additional costs. Further, the average cost of managing, staffing, and processing purchases at the checkout declines with greater sales.

Economies of scale at the chain level come from adoption of new technologies, such as sophisticated communication, information, and logistics technologies. Ellickson (2011) identifies store standardization, pioneered by The Great Atlantic and Pacific Tea Company (A&P) in the 1910s and 1920s, and an unprecedented explosion in logistics, data storage and analysis, electronic payments, and inventory management, starting with mainframe computers and the Universal Product Code (UPC) system in the 1970s and continuing to this day, as major factors that have transformed food retailing. Across sectors, chains tend to invest more in information technology than unaffiliated stores (Doms, Jarmin, and Klimek,

2004; Basker, 2007). As a result, large chains have become increasingly more efficient over smaller retailers that still use older technologies.

Economies of scope refer to cost savings from selling many different products in the same store. At the chain level, economies of scope may stem from lower average transaction costs when multiple products are sold by the same supplier. At the store level, economies of scope can stem from the fact that large shopping orders (baskets) are cheaper to process, on a per-unit basis, than smaller baskets, and consumers buy more items in a single visit in stores with a large array of products for sale.

Holmes (2011) identifies a special form of economies of scale, which he calls "economies of density." The term refers to the ability of a chain with a high local store density to share costs across those stores, for example in local advertising, shared delivery routes, and management cross-training in nearby stores.

2.2.2 One-Stop Shopping

The second source of growth of supermarkets is demand based (Lagakos, 2009; Pashigian and Bowen, 1994). With greater use of automobiles and refrigeration, consumers' ability and desire to consolidate shopping trips, often into a single weekly trip, has increased. So-called "one-stop shopping" minimizes the time spent shopping and waiting in line at checkout, as well as fuel and other costs associated with multiple shopping trips. Large supermarkets that carry a large array of items are better positioned to meet this need than smaller stores. The value of one-stop shopping varies with consumers' valuation of time, access to transportation, and ability to store perishable goods until the next trip. As consumer demand for one-stop shopping has increased, so has the size and selection of supermarkets. Ellickson (2011) reports that the number of products in the average U.S. supermarket increased from 9,000 to 30,000 between 1974 and 1990.

One-stop shopping interacts with economies of scale and scope. For example, supermarkets' adoption of technologies to exploit economies of scale and scope increases when

consumers' demand for one-stop shopping increases. These factors help fuel the current expansion of hypermarkets at the expense of traditional supermarkets.

2.3 Transformation of Food Retailing in Developing Countries

After a century of growth, supermarkets and other large-format food sellers are well established in developed countries. In some developing countries the evolution of this sector has leapfrogged the U.S., skipping the supermarket phase and moving directly into hypermarkets.

Reardon, Berdegué, Timmer, Mainville, Flores, Hernandez, and Neve (2005) provide a history of supermarkets' growth in the developing world, separating it into three waves:

1. The first wave, in the early- to mid-1990s, saw rapid supermarket growth in Costa Rica, Chile, South Korea, the Philippines, and Thailand, each of which achieved a 50% supermarket share of food retailing by the early 2000, close to the U.S. level of 70–80%;
2. Mexico and other countries in Southeast Asia and Central America followed, with supermarket shares reaching 30–50% by the early 2000s;
3. The third wave in the late 1990s and early 2000s included Nicaragua, Peru, Bolivia, Vietnam, India, China, and Russia, whose supermarket sectors just began to develop and reached 10–20% by 2003.

These countries can expect a continued expansion of the supermarket format in the coming years. In only a decade, many Latin American supermarket sectors have developed as much as the U.S. sector did over 50 years (Reardon and Berdegué, 2002, p. 371). Development is typically first seen in capital cities, and over time, spreads to other large and then medium-sized cities, and finally into small towns (Reardon and Berdegué, 2002, p. 375).

2.4 Major Players in Latin America

2.4.1 Evolving Nature of Supermarket Competition

The major food retailers in Latin American countries today vary by country and change over time due to entry, exit, expansions, acquisitions, and divestitures. Major changes in the Latin American supermarket sector in the past decade include the exit of Royal Ahold, which had been a leading player with operations in Argentina, Chile, Ecuador, Paraguay, and Peru just a few years earlier. The information on specific chains listed below is up-to-date at the time of the writing, but as it represents a current snapshot of the industry, it may change at any time.

2.4.2 Wal-Mart

Wal-Mart is a U.S.-based hypermarket chain selling groceries and general merchandise with operations in North America, Central America, South America, Europe, and Asia. Wal-Mart's Latin American operations started with a joint venture in Mexico between Wal-Mart and the Mexican retailer Cifra in 1991. Today, Wal-Mart is the majority owner of Wal-Mart de México y Centroamérica, known as Walmex, which handles half of Mexico's retail sales (Iacovone, Javorcik, Keller, and Tybout, 2011).

As of May 31, 2012, Walmex operated 2,783 stores in 480 cities in Mexico, Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua (Wal-Mart Stores, Inc., 2012b). It is the largest retailer in Mexico as well as in Central America (Wal-Mart Stores, Inc., 2012a).

Wal-Mart is vertically integrated, with 25 distribution centers throughout Mexico and Central America (Wal-Mart Stores, Inc., 2012c). Wal-Mart also sells many products imprinted with its own private label (brand); these products are manufactured by a range of food companies, and not necessarily by Wal-Mart itself.

2.4.3 Carrefour

Carrefour, a French retailer, is the second-largest retail chain worldwide, with operations in Europe, Latin America, and Asia. In the Latin American market, Carrefour operates stores in Argentina, Brazil, and Colombia (Carrefour, 2010). Until 2005, Carrefour also operated in Mexico; it exited Mexico as part of a global refocusing, selling its 29 stores to the Mexican chain Chedrahui (Mattson, 2005). Carrefour is vertically integrated, operating distribution centers, and also sells private-label products.

2.4.4 Cencosud

Cencosud, a Chilean firm, is the largest retailer in Chile and the third-largest retailer in Latin America, operating supermarkets in Argentina, Brazil, Chile, and Perú (Cencosud, 2012b). Cencosud is vertically intergrated, operating distribution centers throughout Latin America (Cencosud, 2012a). Cencosud sells some private-label products (Cencosud, 2012a).

2.4.5 Other Large Chains

Costco, a U.S.-based chain, operates 32 membership clubs in Mexico. Other supermarket retailers operating in Latin America are national and regional chains, both privately and publicly owned. For example, Waldo, Soriana, Casa Ley (partly owned by the U.S. supermarket chain Safeway), and Chedrahui all operate supermarket chains in Mexico (Varela, 2012). Coto is a supermarket and hypermarket chain operating in Argentina. Tiendas Industriales Asociadas (TIA), Corporación La Favorita, and Corporación El Rosado all operate supermarkets in El Salvador. Companhia Brasileira de Distribuição operates in Brazil, and CAFAM operates in Colombia. Additional chains operate in these markets as well. Many of these chains operate under multiple banners (brand names) and offer multiple store formats (such as supermarkets, hypermarkets, and convenience stores).

2.4.6 Single-Store Supermarkets, Specialists, and Informal Markets

Despite the increasing scale of supermarkets, the majority of food stores (by number) are still small single-store operations, including tent markets and other less-formal outlets. Some of these are specialists, such as butchers or bakeries that sell a single product line, while others are general providers. These tend to have higher cost structures than larger firms and differentiate themselves on other dimensions, such as neighborhood location or personal service.

2.5 Differentiation

An important goal of competition authorities is to ensure consumers pay competitively low prices for food. However, supermarkets and other food retailers compete on many non-price attributes that also matter to consumers. Non-price attributes, broadly referred to as "quality," include product selection, freshness, inventory replenishment, service, cleanliness, location, parking, return policies, etc. Different supermarkets position themselves differently in the quality-price space, some offering few frills and low prices and others offering high quality and high prices. That one supermarket charges higher prices than another does not alone indicate that its prices are either excessive or anti-competitive. Non-price attributes that consumers value are important as well. They are also difficult to measure, which complicates competition analysis in the sector.

2.6 Private labels

Supermarkets can compete directly with food manufacturers in another way. "Private-label" products are products that either bear the supermarket's name or the name of a (likely unadvertised) brand that is affiliated solely with that supermarket chain. A private-

label product may be similar or even identical to a competing product sold under a well-known national brand name, and may even be produced by the same manufacturer. Private-label products, which compete directly with national brands and typically appeal to more price-sensitive consumers, are typically priced at a discount over national brands and may pressure manufacturers and wholesalers of brand-name substitutes to offer supermarkets better trading terms.

2.7 Supermarket Pricing Strategies

2.7.1 Importance of Pricing

Competition policy is concerned in large part with pricing and with how competitive and uncompetitive practices affect the prices that consumers pay. Because supermarkets carry a very large number of products, pricing strategies can be complicated.

2.7.2 Product Differentiation

The combination of private labels and special agreements with manufacturers can result in differentiation among supermarkets not only in store-level features (such as location, cleanliness, service, etc.) but also with respect to the products they carry. Similar products may vary in packaging, size, flavor, name, and other features. This differentiation may enhance consumer welfare by providing consumers specialized products. It can also reduce consumers' ability to compare prices of similar products across stores, as well as stores' ability to compare their prices with their competitors' prices.

2.7.3 Focused Pricing, Known-Value Items, and Loss Leaders

"Known-value items" or "key-value items" (KVIs) are supermarket products that consumers are most likely to use for price comparisons. Because supermarkets carry tens of thousands

of stock-keeping units (SKUs) and consumer baskets all differ, consumers cannot realistically compare prices across supermarkets on an item-by-item basis; KVIs provide a shortcut. Some supermarkets compete more intensely over the prices of KVIs than over the rest of the store's inventory (Australian Competition and Consumer Commission (ACCC), 2008; Competition Commission, 2000). This practice is sometimes called "focused" competition. "Loss leaders" are KVIs that are priced below cost in order to draw consumers into the supermarket.

KVIs vary by market, but may include common purchases like milk, eggs, beer, and other items consumers buy often enough to be familiar with their prices. In many U.K. supermarkets KVIs number in the hundreds (Competition Commission, 2000, p. 59).

Low prices of KVIs may be offset by high prices of other items in the shopping basket, particularly of specialty and high-end items that are less susceptible to price comparison by consumers. If non-KVI items are not priced competitively, some consumers may end up paying supra-competitive prices overall. In a U.K. study, however, the U.K. Competition Commission found that focused competition had not resulted in excessive profits for supermarkets, nor in excessive prices paid by consumers (Competition Commission, 2000, p. 5).

2.7.4 Price Matching and Monitoring

Price matching refers to the practice of a supermarket that charges the same price as one or more competing supermarkets in the same area. Matching is common when price is an important channel of competition. It can result in identical prices for some products or in prices that move together over time, a phenomenon known as "parallel pricing." While parallel pricing sometimes gives rise to suspicions of coordinated conduct, it is also a very common competitive outcome.

Price matching requires monitoring of competitors' prices. Monitoring competitors' prices is commonplace, although with the sheer number of products carried by each supermarket, combined with the imperfect comparability of products, brands, sizes, etc., across

stores, monitoring is seldom complete. Hence supermarkets often focus on KVIs or respond to specific promotions by competitors (Competition Commission, 2000).

2.7.5 Promotional Pricing

The practice of “hi-lo” (high-low) pricing involves the use of the frequent promotions in which particular KVIs or other products are sold at a substantial discount for a limited time. Promotions may take several forms including outright price reductions, “buy-one-get-one-free” deals, etc. Some promotions are motivated by overstocked products, products nearing their expiration dates, and discontinuation of specific products, but most are part of a general advertising and pricing strategy. Low-margins on “sale” items are mitigated by high margins on other items in the basket. Promotions may be initiated by the retailer or by the food manufacturer.

2.7.6 Every-Day Low Pricing

Every-day low pricing (EDLP) is the opposite of hi-lo pricing and describes the practice of a supermarket that maintains stable prices on each product over time, and rarely discounts or puts items “on sale.” These prices may or may not actually be low. Many supermarkets employ some hybrid strategy in which they claim to offer every-day low prices and yet still have promotions in which certain products are sold at a substantial discount.

Ellickson and Misra (2008) find that supermarkets using the same pricing strategies tend to cluster together in locations near one another.

2.7.7 Uniform Pricing

Uniform pricing is the practice by a supermarket chain of charging the same prices across all its stores either nationwide or regionally. When items are put on promotion, they are put on promotion at the same price across all stores. Uniform pricing refers only to prices at a single

chain; local competitors' prices may differ. Non-uniform pricing is the alternative in which a supermarket chain allows local demand and competition conditions to influence prices on a store-by-store basis (this practice is termed "price flexing" by the UKCC Competition Commission, 2000, p. 5).

2.7.8 Price Discrimination

Price discrimination is the practice of charging different prices to different consumers for the same product. The most common form of price discrimination is one in which a supermarket makes a lower price available to all consumers at some non-pecuniary cost (such as time, effort, or less-attractive packaging). For example, the cost may be the time and effort involved in clipping or printing coupons and presenting them at the cash register. Typically, lower-income consumers are more willing to incur the cost and therefore pay the lower price, while higher-income individuals more often bypass the cost and pay the higher price.

Examples of price discrimination include:

- Coupons: used to offer some consumers — those who find and cut the coupons out of the newspaper, print them from a web site, etc. — lower prices.
- Loyalty cards: used by some supermarkets to track purchases by household and provide targeted promotions to "members" only. In the U.S., these memberships differ from club memberships in that they are typically free. Members may get cheaper prices on some items, or get "points" on purchases to be redeemed later, in exchange for allowing the supermarket to track their purchases.
- Cross-product discounts: supermarkets may offer a discount on one or more products to consumers who purchase a different product. A common example is discounts on gasoline sold either by the supermarket or by another company to supermarket customers. The typical arrangement is that shoppers who have purchased a basket of goods at or above some minimum total price are entitled to a discount on gasoline.

Supermarkets engage in price discrimination when it improves their profitability. Price discrimination also benefits some consumers, typically lower-income consumers who pay a lower price than they would have paid in the absence of price discrimination. Consumers in a second group, typically higher-income consumers, pay more than they would have absent this pricing strategy. Overall, price discrimination may reduce *or increase* total welfare.

2.8 Wholesale Markets

2.8.1 Types of Wholesalers

Wholesale food sellers include both independent wholesalers and firms that are vertically integrated into wholesaling and retailing. Competition at the wholesale level affects supermarkets, and, indirectly, also consumer outcomes.

Assessing the level of competition in the wholesale market can be as complex as at the retail level. In addition to the usual product and geographic considerations, food wholesalers, like supermarkets, vary in their selection of products and may appeal differently to different buyers. Some wholesalers offer a "full line" of products, selling tens of thousands of products across all major grocery categories, while others are "partial-line" wholesalers and focus on one or a few specialty categories (e.g., produce, meat, dairy). Partial-line wholesalers sometimes differentiate themselves by claiming higher quality or a greater selection of products within their specialty. Different types of wholesalers may be more relevant for different retailers, depending on the retailers' specific needs and the wholesalers' product assortment.

Large supermarket chains are often vertically integrated into wholesaling (Ellickson, 2006). These chains self-supply their stores and may supply small competing retailers as well. The U.S. firm SuperValu, for example, is the third-largest food retailer in the U.S. and also supplies approximately 1,900 unaffiliated supermarkets in 47 states (SuperValu, 2012).

Another source of wholesale competition can come from wholesale cooperatives, in which supermarkets and other food retailers become members and part-owners of the co-op. There are rarely any barriers to membership so cooperatives typically compete for the same types of non-integrated retailers as other wholesalers.

2.8.2 Vertical Integration

Supermarket chains integrated into wholesaling have a network of distribution centers that take the place of traditional wholesalers. Often, stores belonging to the same supermarket chain share a single network of distribution centers and suppliers even when they do not share a brand or banner (Varela, 2012, p. 5). Supermarket chains that are vertically integrated often exploit efficiencies not available to non-integrated supply chains, particularly those that require complementary investments by the supermarket and the wholesaler such as installation of compatible information systems for automated ordering and information sharing.

Only the very largest firms vertically integrate into food production. Kroger, the second-largest retailer in the U.S., for example, owns 15 dairy plants, two ice-cream plants, ten bakeries, two meat plants, and nine manufacturing plants supplying its stores with products including peanut butter, spaghetti sauce, sodas, and packaged nuts; Safeway, another large U.S. supermarket chain, has 20 manufacturing plants in the U.S. and another dozen in Canada (Kroger, 2012; Safeway Inc., 2008).

Independent wholesalers, which may themselves be large, compete head to head with these vertically integrated firms to sell to non-integrated supermarkets and other types of food retailers including smaller chains and single-store operations.

2.8.3 Negotiation

While supermarkets typically post prices for consumers, only some wholesalers use regularly posted prices. The largest wholesalers and the largest retailers typically engage in negotiation

over the terms of their transactions. Negotiations may include the scope of the products the retailer agrees to purchase, the size of the order, minimum quality standards, delivery schedules and destinations, responsibility for shelving and advertising, and other aspects of the deal, including prices and other payments. Given the complexities of these negotiations and of the terms of the agreements, prices alone rarely provide a complete picture of the competitiveness of the transaction at the wholesale level.

2.8.4 Slotting Allowances

Slotting allowances are fees paid by suppliers, in lump sum or over time, in cash or in kind, as a condition for initial placement of a product on a store's shelf or in its distribution center.

A study by the Federal Trade Commission (Federal Trade Commission, 2003), which was limited in its scope (in terms of both the product classes considered and the retailers and suppliers for whom information was obtained) found that slotting allowances were more likely to be paid for refrigerated and frozen products, for which the relevant shelf space is more constrained, and could amount to a substantial share of a product's first-year revenues. As an example, the FTC found that slotting allowances exceed first-year revenues for 10% of ice-cream products.

Theoretically, slotting allowances may serve either pro-competitive or anti-competitive purposes. On the pro-competitive side, slotting allowances may provide a mechanism for a supplier with a particularly good (high-demand) product to signal this quality to the supermarket, and may also increase manufacturers' incentives to create such high-demand products. On the anti-competitive side, slotting allowances may lead to softened price competition and exclude some competitors. Sudhir and Rao (2006) analyze data from a large supermarket chain on all new products offered to it over a nine-month period and find strong evidence favoring efficiency explanations for slotting allowances. In contrast, a survey of firms throughout the supermarket supply chain by Bloom, Gundlach, and Cannon (2000)

highlights concerns that slotting allowances are associated with higher retail prices. The FTC's report does not come down definitively on this issue.

Chapter 3: Market Definition and Market Power

3.1 Market Definition

The first step in many competition investigations and merger reviews is a market-definition exercise. Defining the relevant market allows the competition authority to identify which consumers and which competitors may be affected by specific anti-competitive conducts or mergers. Generally, the relevant market consists of the closest substitutes to the product(s) or service(s) sold by the firm(s) under review, since these closest substitutes are most likely to impose competitive constraints on one other. Products are substitutes if they are similar in the eyes of many consumers and are sold within reasonable proximity to one another. At a minimum, therefore, the relevant market has both a product dimension and a geographic dimension. Relevant markets can also be defined around specific groups of consumers if firms can price discriminate between or among these groups.

Market-definition exercises have long been criticized as both arbitrary and imprecise, especially in the context of differentiated-goods industries, like supermarkets. In the supermarket sector, market definition involves drawing a bright dividing line between the types of products, stores, and formats considered to be competitors to one another and those that do not compete with the firm(s) under investigation. The implication is that firms included in the market definition all exhibit equally strong competitive influences on one another; those outside the market definition, even if just barely outside, are assumed to exhibit no competitive pressures on the firm(s) in question. This black-and-white approach to competition is not realistic in the case of supermarkets, since substitutes in this sector are in reality a

matter of degree (a point originally made by Chamberlin, 1950).

For this and other reasons, market-definition exercises have fallen out of favor with many economists and have been gradually de-emphasized by authorities in the U.S. in the context of differentiated products.

In spite of its problems, market definition remains an integral part of most competition and merger investigations in jurisdictions around the world. Since it is widely used and relied upon, the current chapter highlights potential issues in its use and interpretation that are relevant to the supermarket sector. Chapter 5 considers some alternatives to market definition in the context of supermarket mergers.

3.2 The Hypothetical-Monopolist Test

To apply a kind of quantifiable standard to the notion of "closest competitors," the U.S. Federal Trade Commission (FTC) and Department of Justice (DOJ) in the early 1980s adopted a specific market-definition test known as a "hypothetical monopolist" (HM) test. The test first appeared in the 1982 U.S. Merger Guidelines and has also been included in all subsequent versions of the Guidelines (Werden, 2003). The European Commission adopted the approach formally in 1997, and other countries, including Canada, use it as well (Competition Bureau Canada, 2012).

Starting from a very narrow hypothetical market definition that includes the product or service in question and a geographical area, and assuming competitive pricing, authorities ask whether a hypothetical monopolist could increase its profit by making a **s**mall but **s**ignificant and **n**on-transitory **i**ncrease in **p**rice (SSNIP). If not, other close substitutes must still exist outside the proposed market, so the next such closest substitute is added, and the test is repeated as needed. In the end, the relevant product market is the smallest set of products and geographical area for which a hypothetical monopolist can profit from a SSNIP. Authorities have typically cited five percent as an approximation to "small but

significant" and a year or more as "non-transitory" (U.S. Department of Justice and Federal Trade Commission, 1997, p. 7), although it is important to note that the five-percent test is not a tolerance level for an anti-competitive effect.

Several features of the HM/SSNIP test make its application to the supermarket sector problematic. First, as discussed, the initial market-definition exercise requires a series of discrete "in" or "out" decisions that do not accurately reflect competition in this sector. Substitutes are a matter of degree in the supermarket sector and each in/out decision either overstates or understates a product's or a competitor's true competitive effect.

Second, since the HM/SSNIP test is fundamentally based on price, it does not incorporate non-price attributes well. Supermarkets compete on many dimensions including product quality, selection, and service. A hypothetical monopolist could reduce these valued outcomes in addition to, or instead of, raising prices, limiting the applicability of the HM/SSNIP test.

Third, it is difficult to apply the HM/SSNIP test with scientific rigor. The test is based on the behavior of a hypothetical monopolist, which is, of course, hypothetical. Shortly after the test was introduced, it was famously said that "[the Guidelines' market-definition requirement] has one, wholly decisive defect: it is completely nonoperational" (Stigler and Sherwin, 1985, p. 582). Methods such as "critical loss" can be used to come up with an estimated SSNIP to compare with the 5%, but such calculations are highly simplified and not well suited to differentiated goods.[1] At the other extreme, merger simulations are complex models that could in principle implement the test but their complexity, need for strong assumptions, and "black-box" nature have discouraged their use in courts.

In practice, analysts use a mix of quantitative and qualitative information on elasticities and diversion ratios to argue for or against close substitutability, and therefore inclusion, of a particular product or format in the market definition.[2] Determining what a hypothetical

[1] The critical loss for a 5% price increase is the percentage loss in unit sales that just makes the price increase unprofitable.

[2] The elasticity of demand is the percentage loss in quantity demanded for a 1% price increase. The cross-price elasticity of demand is the percentage increase in quantity demanded at one supermarket for a 1%

monopolist of potentially tens of thousands of products would do, however, is more than difficult.

3.3 Product-Based Market Definition

Market definition in the supermarket sector can be delineated on the basis of product, geography, customer type, and store format.

In many industries other than supermarkets, especially in manufacturing, markets are often defined around one or two physical products and the set of substitutes closest to them. For example, an investigation could surround the behavior of milk producers, automobile manufacturers, or watchmakers.

In the supermarket sector, however, a relevant market surrounding one of two physical products is rarely appropriate. As noted earlier, supermarkets typically carry 20,000 to 25,000 separate items. Supermarkets provide not simply a set of a goods but a service: the arrangement of a large number of products available for sale together in a convenient setting and location, with emphasis on quality, service, one-stop shopping ability, and an overall shopping experience. Supermarkets compete on price as well, but in many cases the relevant price is not the price of an individual item, such as a liter of milk, but the price of a basket of goods purchased by a household for its weekly food consumption. Conduct that inflates the price of one or two products in the basket may be offset by stronger price competition on other items and market definition on the basis of a few products is likely misleading.

One caveat to the emphasis on basket-level competition relates to the use of known-value items (KVIs). Because some consumers use KVIs to gauge relative prices across retailers of many other items, competition for these consumers takes place over a smaller set of products. While an anti-competitive agreement to reduce competition on one or two KVIs

price increase at a competing supermarket. The diversion ratio, which quantifies how much of the displaced demand from one supermarket diverts to a competitor, is a function of both these elasticities. These are all computable in principle but can be difficult to measure in practice.

can be undone with greater price competition on others, the total set of KVIs is smaller than the full set of products and therefore more easily manipulated. How possible this is in practice depends on the number of KVIs; if this number is large, in the hundreds or more, it is unlikely to be practical to limit competition of all KVI prices.

Competition investigations surrounding a few physical products are not unknown in the supermarket business (e.g., supermarket operators in the U.K. were accused of helping facilitate a cartel amongst milk and cheese producers in 2002), but they are rare. In most cases, the relevant market encompasses entire lines of products and the relevant competitors are defined by the format in which they sell groceries.

Case 3.1: Product-Based Market Definition in Wal-Mart Predatory Pricing (U.S.)

In 1991, Wal-Mart was sued by three small competing pharmacies in Arkansas for selling several prescription drugs below cost. A key question in the case was whether a single product, in this case a prescription drug, constituted a relevant market: the plaintiffs claimed that it did, and Wal-Mart countered that it did not.

The trial court sided with the plaintiffs that a single pharmaceutical product could constitute an antitrust market. On appeal, however, the Arkansas Supreme Court reversed the lower court's decision.

Reference: Boudreaux (1996)

3.4 Format-Based Market Definition

3.4.1 Retail Formats

The "format" of a food retailer encompasses many features, including the size and layout of the store, the number and scope of products sold, and the quality of the overall shopping experience. Supermarkets, hypermarkets, warehouse or membership clubs, specialty retailers such as bakeries or fishmongers, wet markets, farmers' markets, neighborhood markets, and convenience stores are all examples of store formats.

Competition analysis in the supermarket sector often begins with a delineation of the type or the format of different competitors and asks whether different formats are sufficiently close to be in the same market. For example, are convenience stores among a supermarket's competitors? What about specialty bakeries? What about large wholesale clubs that sell products by the case instead of individually? Unfortunately, there is often no clear line between the formats such that stores of some formats are clearly competitors while all stores of another format are outside the market.

Rather, competition between stores of different formats is a matter of degree and depends in part on the types of consumers they serve. For example, a health-conscious consumer may consider specialty "fresh-foods" stores selling produce, bread, and dairy to be close competitors to a supermarket, while other consumers, including those who put a greater value on one-stop shopping, do not. A consumer with access to an automobile and ample storage, including a large freezer, may find a warehouse club, where products are often sold by the case, to be a good substitute for the local supermarkets, while a consumer who shops on foot and has a small home may not. Competitive effects therefore depend on the characteristics and composition of consumers.

Several examples illustrate the difficulty of drawing market boundaries around store format. Glandon and Jaremski (2012), for example, find that a traditional supermarket, Dominick's Finer Foods, which operates in the Chicago metro area, lowered prices when a Wal-Mart "Discount Store" opened nearby despite the fact that the Wal-Mart carried only a limited range of grocery products. Courtemanche and Carden (2012) find that entry of the wholesale club Costco affected demand at nearby supermarkets in the U.S. By drawing price-sensitive consumers away from supermarkets, Costco left the supermarkets with fewer, relatively price-insensitive customers and supermarkets responded by *increasing* prices. The Australian Consumer and Competition Commission (ACCC) notes that while supermarkets' "closest competitors are usually other supermarkets with broadly similar retail offers" (ACCC 2008, p. 90), specialty stores exert competitive pressures on supermarket prices, as

evidenced by the significant share of consumers who shop at both types of outlets (ACCC 2008, p. 77).

The FTC and the U.K. Office of Fair Trading (OFT), along with several other competition authorities, typically include all one-stop shopping outlets in a market that also includes supermarkets, but usually exclude limited-assortment, convenience, and speciality stores that sell some but not all of the relevant basket. Club stores are sometimes included and sometimes excluded from the relevant market, depending on the case. Whether or not they are part of the market may vary by region and country.

Case 3.2: Format-Based Market Definition in Merger of Kroger Company and Winn-Dixie Stores, Inc. (U.S.)

In 2000, Kroger, a leading U.S. supermarket chain, proposed acquiring 74 Winn-Dixie supermarkets in Texas and Oklahoma.

In its market analysis, the FTC took the position that only supermarkets and not "club stores, mass merchants, speciality food stores, 'mom & pop' stores, convenience stores, and 'limited assortment' stores" constituted the relevant set of competitors. Among the justifications for this definition was the fact that while Kroger and Winn-Dixie's internal documents and prior behavior (matching price cuts and coupons) demonstrated that they viewed one another as competitors, none of the other-format stores behaved this way. Specifically regarding club stores, the FTC argued that they are not true competitors because they carry only a fraction of the SKUs sold by supermarkets (approximately 2,000 of 30,000, or 7%), with many of those items sold only in large package sizes.

Reference: FTC File No. 001 0057, `http://www.ftc.gov/os/2000/06/krogerbrief.pdf`, accessed July 11, 2012

3.4.2 Wholesale Formats

On the wholesale-purchasing side, different wholesalers cater to different sets of retailers. Which wholesalers compete with one another depends, among other things, on the format of the retailer. For example, a specialty retailer, such as a butcher, that sells just one line of product, may find a partial-line wholesaler of meat to be a close substitute to a full-line wholesaler, but a supermarket that sells a wide range of products may find a full-line

Case 3.3: Format-Based Market Definition in Merger of Wal-Mart Stores, Inc., and Supermercados Amigo, Inc. (U.S.)

In 2002, Wal-Mart Stores, Inc. agreed to purchase Supermercados Amigo Inc., the largest supermarket chain in Puerto Rico and the owner and operator of 36 supermarkets throughout Puerto Rico. Contrary to its approach in the Kroger/Winn-Dixie merger and its general practice of excluding club stores from supermarkets' market definition, in this case the FTC argued that supermarkets and club stores (but not limited-assortment stores, convenience stores, or specialty stores) were part of the relevant market because, in Puerto Rico,

- Supermarkets, supercenters, and club stores routinely monitored and matched prices at other supermarkets, supercenters, and club stores. They did not monitor prices at limited-assortment stores, convenience stores, and specialty stores;
- The opening of a club store caused substantial revenue reductions at nearby supermarkets, and supermarkets tended to engage in heavy promotions in the weeks before and after a nearby club store entry in response;
- Internal supermarket documents refer to club stores as competitors;
- In a consumer survey, a substantial share (37%) of respondents said that wholesale club Sam's Club was a supermarket.

Reference: FTC File No. 021 0090, Docket No. C-4066, 2002, `http://www.ftc.gov/os/2002/11/walmartamigoanalysis.htm`, accessed June 25, 2012

Case 3.4: Format-Based Market Definition in Merger of Almacenes Éxito S.A. and Caja de Compensación Familiar (CAFAM) (Colombia)

In 2009, the Superintendencia de Industria y Comercio (SIC) of Columbia disputed a proposed merger between two large firms, Almacenes Éxito S.A. and Caja de Compensación Familiar (CAFAM), that owned supermarkets and retail pharmacies.

The SIC defined the relevant market for supermarkets as including stores with at least 400 square meters of floor space, including hypermarkets but excluding convenience stores and other small stores.

The SIC further included only "modern" retailers in its market definition, excluding traditional stores, noting fundamentally different shopping patterns in the two types of stores: it found 42% of shoppers in traditional stores made daily purchases, but only 4% of the shoppers in modern stores did so.

Reference: SIC documents

wholesaler preferable to a patchwork of partial-line wholesalers. Independent wholesalers may compete for smaller neighborhood and convenience stores, but not directly for large

vertically integrated hypermarkets. Although independent wholesalers generally do not supply integrated supermarkets, they are not wholly outside the market, either: their business depends on the success of their customers at the retail level, and these, in turn, compete with integrated supermarkets.

Case 3.5: Wholesale-Market Format-Based Market Definition in Asset Exchange by C&S Wholesalers and SuperValu Market Division (U.S.)

A class-action lawsuit against the two largest supermarket wholesalers in the U.S., C&S Wholesalers and SuperValu, claimed the wholesalers traded food-distribution centers in the U.S. Midwest and Northeast as part of a market-division agreement that effectively monopolized the two regions, with one firm left in each region.

The suit argued that full-line wholesale services, distinct from partial-line wholesale services, constituted a relevant antitrust market. The class was denied certification in July 2012, so no judgement was made on the appropriateness of the format-based market definition used. Future actions are possible.

Reference: U.S. District Court for the District of Minnesota, Civil Action No. 09cv983 PJS/AJB, Second Amended Class Action Complaint, June 29, 2009, `http://amlawdaily.typepad.com/grocerysecondamendcomp.pdf`, accessed July 9, 2012; and U.S. District Court for the District of Minnesota, Class Certification Order, July 16, 2012, `http://www.mnd.uscourts.gov/MDL-Wholesale/Orders_Minutes/2012/2012-0726-Class-Certification-Order-redacted.pdf`, accessed September 10, 2012

3.5 Geography-Based Market Definition

3.5.1 Levels of Competition

Competition in the supermarket sector takes place on two geographic levels simultaneously. At the retail level, competition for consumers along dimensions of prices, selection, location, quality, and other store attributes, takes place at a very local level: often a town or neighborhood. At the same time, competition among supermarket chains to lower wholesale costs and generate chain-level efficiencies also takes place at a regional, national, or even international level.

Competition among wholesalers can be local, regional, or national, depending on supply networks and types of products sold.

3.5.2 Retail Markets

At the retail level, gauging the geographic areas in which supermarkets compete for consumers is essential to competition analysis. A supermarket with high local density may have market power even if it is not a large national player, whereas a national player with no local supermarkets has essentially no market power in that locality.

The most suitable geographic boundary for the HM/SSNIP test depends on available transportation modes (walking, bicycling, driving), infrastructure (roads, sidewalks), commute patterns, the cost of time and fuel, and other considerations. Since these factors vary across locations and change as the economy develops, there is no obvious "one-size-fits-all" geographic solution. In the U.S. and Europe, firms like ACNielsen and Information Resources Inc. (IRI) collect detailed shopping data from households and can determine the typical distance traveled and the degree of substitution and cross-patronization across stores and formats. In developing countries this is harder and may require special surveys. If supermarket advertising is prevalent, analyzing the area over which a supermarket advertises may provide some information.

The FTC has often used a three- or five-mile (five- or eight-kilometer) radius around each supermarket to denote the store's catchment area. Based on surveys of consumer commuting patterns, the Competition Commission (2000, p. 21) argues that the relevant market for a one-stop shopping supermarket is the area within 10 minutes of travel in an urban area and within a 15-minute commute in other areas. Consistent with this position, a recent study by Ellickson and Grieco (2013) finds that Wal-Mart Supercenters' impact on supermarkets in the U.S. is confined to a two-mile (3.2 km) radius.

Data from supermarket loyalty cards, if available, can help competition authorities refine the geographic market. The FTC uses customer addresses from loyalty cards to determine

the radius around a supermarket covering 80–85% of the supermarket's customers. Repeating this analysis for nearby supermarkets provides an estimate of the degree of overlap between supermarket cachement areas. Substantial overlap implies that the number of marginal customers may be sufficiently high to warrant putting the two supermarket locations in the same geographic market; in densely populated areas the overlapping areas produce chains in multiple directions, and this implies that the geographic market may be quite large, not just limited to a neighborhood. Absent (or in addition to) loyalty-card data, the geographic area in which a supermarket advertises or can also be informative of the supermarket's geographic market.

In urban areas, most consumers shop within a short driving, public-transit, biking, or walking distance from their homes or workplaces. A U.S. survey found that consumers' travel time to a grocery store averages 12.5 minutes from their last destination (which may be home, another store, or some other location), and that 11% of people shop for groceries along their commuting route (Brown and Borisova, 2007). In rural areas, accessing a supermarket can be more difficult. Another U.S. study found that shoppers in rural Iowa counties regularly shop at two grocery stores weekly and travel about 18 minutes each way (Bitto, Morton, Oakland, and Sand, 2003). Many travel outside their counties to shop at supercenters, discount or wholesale food stores.

The geographic range of a market may vary by product characteristics; specifically, for highly perishable products such as fresh seafood, the relevant geographic area may be smaller than for non-perishable items like canned goods or cleaning supplies.

The difficulty of going to a supermarket increases when transportation options are more limited. However, limited transportation options create opportunities for smaller food stores, often at higher prices, to fill the gaps in supermarket coverage.

Defining markets geogrpahically becomes even more ambiguous if consumers shop online. While grocery shopping online is still relatively rare, it is a growing phenomenon. Some stores offer home delivery, which expands the reach of the stores to consumers who are either too

far from a retail location (if delivery is done from a central warehouse) or do not have adequate transportation to carry merchandise home. At an extreme, online retailers may not have a local presence at all, in which case the retailers' geographical reach includes any location from which consumers can access the internet and to which an individual company will deliver. The former is constrained only by consumers' access to technology; the latter, by a firm's willingness to ship and pay applicable taxes. If online grocery shopping becomes common, geography-based market definition may need to be revisited.

Case 3.6: Geography-Based Market Definition in Merger of Kroger Company and Winn-Dixie Stores, Inc. (U.S.)

In the 2002 merger case of Kroger and Winn-Dixie (Case 3.2), the FTC argued that Fort Worth constitutes a separate market for the purposes of this merger analysis, although it is part of a larger metropolitan area that includes Dallas. The argument cited the following justifications:

- Consumers in Dallas and Fort Worth rarely travel more than 2 miles to do their grocery shopping; a store's "trade area" is a circle with radius of about 2–3 miles (3–5 km) around it;
- The distance between the Fort Worth and Dallas city centers is over 30 miles and the travel time is 45 minutes;
- There is an undeveloped barrier between the two cities which includes lakes, a major airport, and a naval air station.

Reference: FTC File No. 001 0057, `http://www.ftc.gov/os/2000/06/krogerbrief.pdf`, accessed July 11, 2012

Case 3.7: Geography-Based Market Definition in Merger of Almacenes Éxito S.A. and Caja de Compensación Familiar (CAFAM) (Colombia)

In the proposed Almacenes Éxito S.A. and CAFAM merger in Columbia (Case 3.4), the SIC noted that Éxito and CAFAM only competed head-to-head four cities prior to the merger: Bogotá and three close municipalities. The three small municipalities are each considered one market. For Bogotá, the analysis used the area within a 10-minute drive of each store as that store's catchment area.

Reference: SIC documents

3.5.3 Wholesale Markets

Geographic markets for wholesalers tend to be much larger, often encompassing several hundreds of square kilometers. In this case the market depends on the reasonable distance for trucks making deliveries from a distribution center, and on the transport infrastructure (highways) over long distances.

It can further vary with the payload in question. Feasible transportation distances may be smaller for some products, like produce, fresh seafood, and other fresh products, depending on infrastructure and refrigeration capabilities.

Finally, there is a distinction between the average distance trucks actually travel from a distribution center to a store and the maximum distance they could travel. The latter is sometimes harder to observe but remains relevant for competition enforcement. Fairly distant wholesalers can place some competitive pressure on local wholesalers even if they make no sales in a local area. Their costs of supplying the local market are higher because they would have to transport goods over a longer distance, but they can limit local wholesalers' price premiums to that difference in cost. This type of price pressure by companies that are not actual competitors in a market, but that could enter it at any moment, is called "contestable entry."

3.6 Customer-Based Market Definition

Market definition can differ by groups of consumers when price or other kinds of discrimination are possible. This type of market definition recognizes that a potentially anti-competitive act can significantly harm a narrow group of consumers even when the harm may not appear substantial in the aggregate.

For example, an anti-competitive act by supermarkets involving coupons could cause harm to consumers using coupons while causing no harm to the majority who do not. A

market definition restricted to just the group of coupon-using consumers captures this effect and avoids diluting the analysis by mixing coupon users with those in the unaffected majority.

3.7 Market Shares and Market Concentration

3.7.1 Market Shares

Calculating market shares is the final step in the process that starts with defining the market on the basis of product, geography, format, and/or consumer type, and follows with identifying market participants based on this market definition. Market shares can help competition agencies screen acts based on their anti-competitive potential. Often, high market shares or high concentration ratios based on those market shares are assumed to correspond to greater market power and greater potential for abuses of that power. Low market shares and low concentration, on the other hand, are less likely to raise concerns of market power and the potential for consumer harm. Where market power and the potential for harm is high, a more detailed investigation is likely to proceed.

The 1997 U.S. Merger Guidelines, for example, list a 35% market-share screen for unilateral effects of mergers, a screen that was dropped in the 2010 Guidelines. The 2012 Canadian Abuse of Dominance Guidelines contains a 35% market share screen for dominance cases (Competition Bureau Canada, 2012).

The use of market shares in the supermarket sector is problematic for several reasons. First, market shares are conditional on market definition, which, as discussed, is imprecise. Decisions made with respect to format-based market definition often result in the inclusion or exclusion of entire formats, or classes of stores, from the market under consideration. Each format included, and each format excluded, may encompass many stores, which, combined, can account for significant amount of revenue. Including or excluding a given format can therefore dramatically change both the calculated total size of the market and the resulting computed market shares. And yet neither including nor excluding a class of stores is typically

correct; the truth is somewhere in between. Even if stores of a given format may not be close competitors to the store(s) under investigation, they may not be so distant that they have no competitive impact at all. The in/out decision, necessitated by the market definition exercise, creates error in the investigation process.

An example of this type of sensitivity comes from the Australian Consumer and Competition Commission (ACCC), which found that market shares differed depending on the range of products used in the computation (including or excluding fresh produce, for example), the cities or regions included in the analysis, and the size cutoff for supermarkets (e.g., 1,000, 2,000, or 3,000 square meters) (ACCC 2008, chapter 3). Market shares also differed based on the data used to calculate them. The ACCC found different market shares using data from a consumer survey, data from ACNielsen's point-of-sale data, and administrative data from the companies themselves (ACCC 2008, chapter 3).

Second, even if a market definition exercise could be "correct," market-share calculations do not measure competitive constraints properly because they are calculated on the basis of sales or revenues, and do not take into account non-price attributes of the shopping experience. As a result, market shares can overstate the competitive influence of high-price, high-service supermarkets and understate the effect of low-price, no-frills supermarkets, even for the same physical pass-through of product.

In spite of these problems, market shares can and do help competition authorities screen for firms that may have market power and for mergers that could upset the competitive equilibrium.

3.7.2 Market Concentration

Market shares are often converted into market-concentration ratios such as the Herfindahl-Hirschman index (HHI), which can be used as a screen instead of raw market shares. The HHI is a popular concentration measure, equal to the sum of the squared market shares of all market participants. For example, if two supermarkets with no other competitors have

market shares of 75% and 25%, respectively, the HHI is $75^2 + 25^2 = 6,250$. The HHI is close to zero for unconcentrated markets and equal to 10,000 for a monopoly.

In the U.S., the 1997 Merger Guidelines state that a post-merger Hirschman-Herfindahl index above 1,000 combined with a change in the index of 100 or more due to the merger, or an index over 1,800 with a change of 50 or more, often warrants further consideration. Canada adopted a similar metric. For the 2010 U.S. Guidelines, the thresholds were updated to 1,500 with a change of 100 or more, or 2,500 with a change of 50 or more. In the 2004 E.U. Merger Guidelines, the thresholds were given as 1,000 with a change of 250 or more, or 2,000 with a change of 150 or more (European Commmision, 2004).

Another measure of concentration is the N-firm concentration ratio (CR), the sum of shares of the largest firms. The CR4 (top four firms) and CR5 (top five firms) are two of the most common.

In Australia, a market with a CR4 in excess of 75% is considered concentrated for the purposes of merger assessment (ACCC 2011, p. 36). Despite the fact that the two largest supermarket chains in Australia account for about 87% of supermarkets with floor space exceeding 2,000 square meters, however, the ACCC cautions that "concentration levels alone do not dictate the nature of competition" (ACCC 2008, p. xv).

Reardon and Berdegué (2002) report, using data from 2001–2002, five-firm concentration ratios (CR5) ranging from 47% in Brazil and 55% in Chile to 96% in Costa Rica and 99% in Guatemala. The U.S. Census reports that the supermarket sector's CR4 in 2002 was 32.5% nationally; it was virtually unchanged, at 32%, in 2007 (U.S. Census Bureau, 2005, 2012).[3]

The usefulness of concentration ratios as screens has been disputed (Gilbert and Rubinfeld, 2010). In their latest guidelines, U.S. agencies have de-emphasized the use of market shares and HHI, and caution that thresholds should not be taken as a rigid screen.

[3]These numbers are not strictly comparable across countries due to differences in data-collection methods and the boundaries of the sector being measured. The U.S. figures include traditional supermarkets and grocery stores but not club stores and hypermarkets, for example.

3.8 Market Power

High market shares and market concentration have sometimes been taken, especially historically, as direct evidence of market power and evidence that harm from a potentially anti-competitive act was likely. However, high market shares do not necessarily translate into market power or higher prices. A supermarket may have a high market share precisely because it competes aggressively for customers and offers a high value for the price, and yet that supermarket may not have the power to make a SSNIP and remain profitable.

Many investigations of potentially anti-competitive acts must show firm dominance as a first step. Acts undertaken by small firms are unlikely to substantially harm competition. When a showing of competitive harm is required, a direct empirical measurement of harm generally dominates inferences based on market share or concentration alone. For example, the impact of potentially anti-competitive acts that require evidence of market power can be determined using direct evidence based on available data showing higher prices, lower output, lower quality, or other consumer effects. The data may show an act substantially harmed competition, irrespective of the exact market share of the firm(s) or concentration level of the market under review.

In merger matters, again direct measurement of post-merger competitive effects and harm dominate the use of market shares or concentration. Merger matters are generally more difficult to analyze because any anti-competitive effects are only anticipated. However, many types of direct evidence based on current data can inform merger investigations. The recent Staples/Office Depot and Whole Foods/Wild Oats merger cases in the U.S. are good examples of the usage of direct evidence; these cases are discussed later in this report as Cases 5.5 and 5.6.

The next two chapters discuss challenges in competition enforcement and in merger enforcement in the context of the supermarket sector.

Chapter 4: Competition Issues

4.1 Legal and Policy Environment

4.1.1 *Per-Se* Illegality vs. Rule of Reason

Courts have distinguished between two types of anti-competitive acts: *per-se* illegal acts, which do not have any redeeming value and are always considered anti-competitive and thus illegal; and rule-of-reason acts, which may or may not have anti-competitive effects, and require a showing of actual competitive harm before a judgement can be made against them. Which acts are considered *per-se* illegal and which need to be investigated under the rule of reason varies by jurisdiction and over time.

In the U.S., a range of conduct once considered *per-se* illegal is now investigated under the rule of reason. In fact, *per-se* treatment is generally now restricted only to collusive acts such as price fixing, market division, and group boycotts (Weg, 2009).

Canada also applies rule-of-reason analysis to most non-conspiratorial but potentially anti-competitive acts, requiring evidence of both substantial market power and actual harm as conditions for a negative judgment.

In Argentina, there is no *per-se* rule. Article 2 of 1999 Law 25,156 lists 14 anti-competitive practices that may be illegal if they fall under the general definition of anti-competitive acts in Article 1, but all acts are subject to the rule of reason (Coloma, 2009).

Panama had a *per-se* rule prohibiting, for example, hard-core cartels, but a legal change in 2007 eliminated the *per-se* approach in favor of a rule of reason approach focused on economic efficiency (OECD 2010, p. 13).

Mexican law distinguishes between "absolute" monopolistic practices, which are *per-se* illegal, and "relative" monopolistic practices, which are illegal if perpetrated by a firm with "substantial" market power and not justified by efficiency concerns (OECD 2006, p. 267).

In some cases, the legal environment crosses jurisdictional lines. Brazilian and Argentinian competition authorities have cooperated since 2003 by allowing information exchange on anti-competitive conduct, and in some cases share their information with Uruguay and Paraguay when the issue is relevant to the Southern Common Market (Mercado Común del Sur, or MERCOSUR) (Economist Intelligence Unit, 2011a).

4.1.2 Policy Goals

Because different jurisdictions and competition agencies have different policy goals, some acts, even under the rule of reason, may be treated differently across jurisdictions.

A common policy goal is a "consumer welfare" goals whereby agencies seek to maximize the benefits consumers receive from the market, as a group, ignoring costs or benefits incurred to other market participants. This is the standard used by the U.S. Federal Trade Commission, which therefore view acts that lead to lower consumer prices as benign even if other firms are harmed in the process. In Argentina, the Comisión Nacional de Defensa de la Competencia (CNDC) also generally aims to maximize consumer welfare (Coloma, 2009).

Other agencies seek to maximize economic efficiency, which is the sum of consumer welfare and producer welfare. Chile's competition authority sees its goal as maximizing economic efficiency (OECD 2011, p. 11).

Some agencies use a hybrid goal of the two. The policy goal in Honduras is efficiency and consumer welfare, with free competition viewed as a means to these ends (OECD 2012, p. 15). These goals are shared by El Salvador (OECD 2008, p. 11) and the Dominican Republic (Infante and Solano, 2009).

Other agencies, such as the Canadian Competition Bureau, consider protecting small and medium firms' ability to compete in the marketplace a goal in itself. In Colombia, for

example, a 2000 law specifically emphasizes the need to protect small- and medium-sized firms from unfair competition (Economist Intelligence Unit, 2012a).

4.2 Horizontal Collusion

4.2.1 Legal Environment

Horizontal collusion among competitors to restrict competition and inflate prices and profits is forbidden in virtually all jurisdictions. Examples of horizontal collusion include explicit price-fixing agreements and market-division agreements in which firms agree not to compete in each other's territories.

In the U.S., horizontal collusion is a violation of Section 1 of the Sherman Act of 1890, which forbids agreements "in restraint of trade or commerce." While many other kinds of contracts and agreements that fall under Section 1 are considered under the rule of reason, price fixing, market division, bid rigging, and group boycotts are illegal *per-se* (Weg, 2009).

In the E.U., agreements among horizontal competitors to restrict trade are violations of the Treaty of the Functioning of the European Union (TFEU) Article 101, and in Canada, of Section 45 of the Competition Act of Canada.

In Argentina, horizontal agreements are a violation of Article 1 of Law 25,156 (Coloma, 2009). Although Argentina does not have any *per-se* rules, the CNDC has always found horizontal collusion to be anti-competitive (Coloma, 2009).

Colombia's 1992 Decree of Cartels makes it a violation to engage in horizontal collusion and other acts that have anti-competitive intent or effects; in other words, even acts that are taken in good faith may be punished if their effect is deemed anti-competitive (OECD 2009).

In Mexico, horizontal collusion is considered an absolute monopolization practice and is *per-se* illegal (OECD 2006, p. 268).

Honduras adopted a *per-se* rule prohibiting horizontal collusion in Articles 5 and 6 of the 2005 Law for the Defense and Promotion of Competition in Honduras (OECD 2012, p. 27). Cartels are also *per-se* illegal in El Salvador (OECD 2008, p. 12) and, with the exception of vertical cartels, in the Dominican Republic (Infante and Solano, 2009).

In Peru, the Instituto Nacional de Defensa de la Competencia y de la Protección de la Propiedad Intelectual (Indecopi) uses a hybrid *per-se* rule and rule-of-reason approach to cartels, reviewing each collusive agreement on a case-by-case basis but without analyzing market power and other possible justifications as is standard under a typical rule-of-reason analysis (OECD 2006, p. 341).

Prosecuting cartels is made easier in many countries by leniency programs that give amnesty or favorable treatment to the firm or individuals that first inform authorities of the cartel and subsequently cooperates in the investigation. The U.S. Department of Justice calls its leniency program its "most important investigative tool for detecting cartel activity" (U.S. Department of Justice, 2012). Such programs are common, but not universal. Honduras, for example, does not currently have a leniency program (OECD 2012, p. 8).

4.2.2 Entry Barriers

Barriers to entry are essential to the enforcement of horizontal-collusion agreements. In the absence of barriers to entry, the agreements leave room for entrants to profitably enter and undercut the colluding parties' prices, thus undermining the agreement.

Although barriers to entry into the supermarket sector are generally low in the long run, they may vary by store format and location, and in some cases may be substantial in the short run. Recent research has shown that entry can be slow and that entrants rarely gain substantial market share (more than 5%) within a few years of entry (Hanner, Hosken, Olson, and Smith, 2011). Zoning regulations that forbid new supermarkets to open in certain areas may be one reason for this slow response. Economies of scale and scope may also create

"natural" barriers: situations in which a single firm or small number of firms more efficiently serve demand because they can exploit the cost savings associated with scale.

Case 4.1: MetCash Entry-Barriers Investigation (Australia)

Recently, the ACCC investigated MetCash, an Australian wholesaler that supplies a large share of small supermarkets. In considering whether MetCash benefited from barriers to entry, the ACCC analyzed several potential constraints on the wholesaler's prices, including:

- The likelihood that if wholesale prices were too high, the wholesaler's small supermarket customers would go out of business;
- The threat of these supermarkets, either independently or in some sort of organized way, forming a competing wholesale operation;
- The possibility of an existing vertically integrated supermarket chain emerging as a wholesaler competitor; and
- The threat of entry by a new wholesaler.

The ACCC found that none of these constraints were particularly binding and that the wholesaler operated with some degree of monopoly power in the wholesale market. It did acknowledge, however, that MetCash's own economies of scale and scope were not as large as those of the vertically integrated chains, and that a breakup of the monopoly could reduce these scale and density economies even further.

Reference: Australian Competition and Consumer Commission (ACCC) (2008, chapter 7)

4.2.3 Price Fixing

The possibility of price fixing must be a concern to any competition authority as a general matter. With very few exceptions, price fixing is harmful to consumers and has no redeeming value for competition.

In the supermarket sector, there is a relatively low risk of price fixing on a large scale. Given the sheer number of products carried by most supermarkets, price fixing of many products across many stores and chains is difficult. However, there is always the possibility of price fixing of some items or at some stores in an area. Supermarkets' commonplace monitoring of their competitors' prices can serve to enforce high prices.

Generally, documentary evidence, including confessions and company records, are needed to prove a price-fixing agreement. Other methods of inferring a price-fixing conspiracy, specifically through circumstantial economic evidence, may be unreliable. For example, co-movement of prices, or "parallel pricing," is sometimes cited as indicative of a secret, underlying price conspiracy. However, parallel pricing can also occur in competitive markets for legitimate economic reasons. First, prices are based on product costs, so when costs common to supermarkets change, so do those supermarkets' retail prices. Second, in competitive markets, price matching — a unilateral decision that results in parallel pricing — is a common and legitimate response to both price decreases and price increases by competing firms, as discussed in Section 2.7.4.

When circumstantial evidence of price fixing is used successfully, it is generally both overwhelming and includes so-called "plus factors." Plus factors are the sorts of circumstantial evidence that support a conclusion that the existence of common pricing by two or more competitors is unlikely to have devolved other than by overt agreement among those competitors. Plus factors may include, for example, systematic evidence of prices rising immediately following each meeting of the alleged conspirators.

Circumstantial evidence can nonetheless be helpful in the investigation stage when it points authorities to potential cartel interactions and induces a cartel member to step forward under a leniency program.

Case 4.2: Pharmacy Price Fixing (Chile)

In 1995, the Chilean Prosecutor's Office successfully prosecuted a group of retail pharmacies in Santiago for price fixing. The agreement was made to end a price war that had started when a new, low-price competitor had entered the market. Although this case did not involve supermarkets, it is illustrative of the type of of evidence used by the prosecutor: a combination of price surveys and, importantly, direct testimony from some of the parties admitting to the price-fixing agreement.

Reference: OECD 2006, p. 218

Case 4.3: Dairy Price Fixing (U.K.)

In 2002, the U.K. Office of Fair Trade (OFT) announced an infringement decision against five dairy companies (Arla, Dairy Crest, Lactalis McLelland, The Cheese Company, and Wiseman) and five supermarket chains (Asda, Morrisons, Safeway, Sainsbury's, and Tesco) for participating in price-fixing agreements in 2002 for cheese and in 2003 for cheese and milk.

According to news reports, the OFT alleged that the cartel operated using an "A-B-C information exchange," whereby supermarkets passed price information to one another through an intermediary, in this case dairy companies.

Since price fixing is *per-se* illegal in the U.K., the OFT only needed to show that the price-fixing agreement existed; it did not need to show any impact on prices.

In 2011, having completed its investigation, the OFT fined the companies a total of nearly £50 million. Arla, which was the first company to notify the OFT of the agreement among the companies, benefitted from complete immunity from fines under the OFT's leniency program.

Reference: `http://www.oft.gov.uk/news-and-updates/press/2010/45-10` and `http://www.oft.gov.uk/news-and-updates/press/2011/89-11`, accessed July 10, 2012; and Binham (2011)

4.2.4 Market Division

Market-division agreements are agreements among competitors to divide up customers rather than compete for them. The most common division is along geographic lines — for example, a metropolitan area assigned to each firm — although it could be along product lines or even customer types instead. By creating geographical monopolies, market-division agreements can often achieve the same ends as price-fixing agreements. In the U.S., market-division agreements are *per-se* illegal.

As in the case of price fixing, direct evidence of a market-division agreement is generally necessary. There are many legitimate economic reasons for a firm to exit or not enter a particular geographic area, or to target only certain product lines and customers and not others. In the supermarket sector in particular, economies of density induce many supermarket chains to concentrate geographically. This alone does not indicate market division. Direct evidence of a conspiracy, from confessions or documents, is generally necessary.

Case 4.4: Asset Exchange by C&S Wholesalers and SuperValu Market Division (U.S.)

In the class-action lawsuit against the wholesalers C&S Wholesalers and SuperValu (Case 3.5), the lawsuit alleged that after encroaching on one another's historical territories for years, the two wholesalers signed an "asset-exchange agreement" to create geographic monopolies. Within six months both wholesalers closed the distribution centers they had just bought from one another.

The suit claimed that barriers to entry prevented small entrants from undoing the harm caused by the agreement. SuperValu responded that its regional concentration reflected economies of scale and density.

As the class was denied certification, no judgement has been made on the merits of the case.

References: U.S. District Court for the District of Minnesota, Civil Action No. 09cv983 PJS/AJB, Second Amended Class Action Complaint, June 29, 2009, `http://amlawdaily.typepad.com/grocerysecondamendcomp.pdf`, accessed July 9, 2012; and U.S. District Court for the District of Minnesota, Class Certification Order, July 16, 2012, `http://www.mnd.uscourts.gov/MDL-Wholesale/Orders_Minutes/2012/2012-0726-Class-Certification-Order-redacted.pdf`, accessed September 10, 2012

4.3 Abuse of Dominance

4.3.1 Legal Environment

While having a dominant market position in and of itself is not illegal in most jurisdictions, including the U.S., the E.U., and most Latin American countries, it is illegal in a few jurisdictions. Monopolies are banned in Peru's constitution and in Ecuador by a 1999 law prohibiting practices that might lead to monopolistic behavior (Economist Intelligence Unit, 2011b, 2012b). Panama decriminalized monopolization in 2007 and like most other countries now prohibits only the abuse of that power (OECD 2010, p. 26).

Abuse-of-dominance laws limit the range of acts a firm with substantial market power can take. An "abuse of dominance" or "abuse of dominant position" occurs when such a firm engages in a practice that, due to the firm's dominant market position, effectively impedes competition in a market. Typically, but not always, these are acts intended to harm or eliminate competitors. Examples include excessive pricing, price discrimination, predatory pricing, refusal to deal, exclusive contracts, and the raising of rivals' costs. Other acts, even though they harm competitors, are not typically considered abusive in most jurisdictions when they lead to better consumer outcomes. For example, being more efficient and better priced, more innovative, or providing a superior product or choice is typically not abusive even though it harms competitors. If, by competing aggressively (through lower prices, better quality, higher levels of service, etc.), firms gain a dominant market postion, this is not generally considered bad in and of itself. Thus, most abuse-of-dominance acts in most jurisdictions are judged under the rule of reason and require a showing not only dominance but substantial harm to competition.

In the U.S., anti-competitive acts that abuse a dominant position are prohibited by Section 2 of the Sherman Act of 1890 and various sections of the Clayton Act of 1914 and the Robinson-Patman Act of 1936. In the E.U., abuse of dominance is prohibited by Article

102 of the TFEU and in Canada, by Sections 78 and 79 of the Canadian Competition Act.

Following the E.U., Argentina considers two types of abuse of dominance to be illegal. The first type consists of "exclusionary" acts: acts that exclude actual or potential competitors from the market. The second type of illegal acts consists of "exploitative" acts, that is, acts that establish prices or other conditions that differ from competitive levels (Coloma, 2009).

Chilean law prohibits abuse of dominance, including market division and other "predatory or unfair competitive practices conducted in order to attain keep or increase a dominant position" in Article 3 of the Competition Act of 2003 (Law No. 19.911) (OECD 2011, p. 17).

Colombia prohibits abuse of dominance under Article 1 of Law 155/1959 and Decree 2153/1992, which includes several examples of abuse of dominance (OECD 2009, p. 23).

Honduran law does not explicitly ban abuse of dominance, but the Law for the Defense and Promotion of Competition in Honduras pertains to abusive conduct, and the law's sanctions depend on the offending firm's market share (OECD 2012, p. 8).

The market share above which a firm is considered to have a dominant position is usually left ambiguous in the law and varies across jurisdictions. Some countries, including Honduras, in practice use a 20% cutoff for most cases (OECD 2012, p. 33). Canada uses a market-share screen of 35% (Competition Bureau Canada, 2012), while the U.S. uses 60–70% (Masoudi, 2007). In the supermarket context, the U.K. Competition Commission (2000) concluded that certain practices are anti-competitive when conducted by supermarkets with nationwide market share of 8% or above.

Since acts are typically only illegal when combined with market power, the same actions taken by two different firms, or even by the same firm at two different points in time or in two different markets, may receive different legal treatment.

Barriers to entry are important in abuse-of-dominance cases as well. In the absence of barriers to entry, a dominant supermarket or supplier could only stay dominant if it charged

competitive prices and offered high value to its customers. Anti-competitive conduct by a dominant firm can only be sustained in the presence of barriers to entry that limit or delay the ability of potential competitors to enter the market or expand to undercut the offending firm.

4.3.2 Price Discrimination

Price discrimination is the practice of charging different prices to different consumers for the same product. Here, the term "price" is defined broadly to include not only the invoice price but also other costs including delivery cost, delivery schedule, and other terms.

In the U.S., price discrimination that harms competition is forbidden under the Robinson-Patman Act of 1936, though in past decades relatively few price-discrimination cases have been actively pursued by federal authorities. In a 2007 report, the U.S. Antitrust Modernization Commission (AMC), appointed by the President, recommended repeal of the Robinson-Patman Act since it "protects competitors over competition and punishes the very price discounting and innovation in distribution methods that the antitrust laws otherwise encourage" (AMC 2007, p. iii). Further, the AMC noted that the Act led many producers to be inefficient — producing a wide variety of package sizes, flavors, and varieties at additional cost solely to protect against liability, since a violation can only occur when the identical product is sold at different prices (AMC 2007, p. 341).

The E.U. and Canada prohibit competition-lessening price discrimination in their respective abuse of dominance laws. In the E.U., competition-lessening price discrimination is prohibited by Article 102 of the TFEU, and in Canada by Sections 78 and 79 of the Competition Act. Canada decriminalized price discrimination in 2009. Discrimination on price or other terms with the intent or effect of reducing or eliminating competition is explicitly listed as an abuse of dominance in Article 50 of Colombia's Decree 2153/1992 (OECD 2009, p. 24).

Supermarkets routinely practice price discrimination, as described in Section 2.7.8, using coupons or loyalty cards, location-based or even time-based pricing. These generally do not harm the competitive process.

Price discrimination by producers or wholesalers, on the other hand, can at times be anti-competitive. However, there are also pro-competitive rationales for price discrimination at the wholesale level, and the practice may enhance economic welfare. As noted in Section 2.8.3, wholesale prices are often the result of individual negotiations, depend on the size and negotiating skills of the buyers, the amount purchased, the terms agreed to, the amount of promotional activity, and the presence of competitive alternatives at both the wholesale and retail levels.

U.S. enforcement on this topic has evolved over time. In 1967, the U.S. Supreme Court ruled that three national manufacturers of frozen pies violated the Robinson-Patman Act by charging lower prices for pies in Utah than in other regions. The manufacturers claimed that prices were lower to meet competition from Utah Pie, the dominant firm in the area, and benefited consumers. Many economists argue the decision was a misinformed one, because it attacked legitimate competition. Today, U.S. competition policy is focused on consumer harm, and this type of practice is not considered anti-competitive (Elzinga and Hogarty, 1978).

Common defenses to a price-discrimination claim include:

- Cost-based discrimination: Prices charged to one supermarket or chain are lower than those charged to another supermarket due to lower costs associated with supplying the former, perhaps due to more convenient access to supplied stores or because of economies of scale in supplying them;
- "Meeting competition": A better price is offered to match or beat a competing supplier.

An often-cited example of potentially anti-competitive price discrimination occurs when an upstream seller has a direct interest in a downstream market. Absent direct interest in the retailing business, wholesalers typically have little incentive to harm or eliminate part

of their own customer base by selling to some retailers at disadvantageous prices. However, an integrated supermarket that is a monopolist wholesaler in an area or of some product(s) may charge unfavorable prices to supermarkets it does not own in order to facilitate their exit and monopolize the supermarket sector as well.

4.3.3 Refusal to Deal

Refusal to deal refers to a situation in which a firm with market power refuses to supply or buy from a particular customer, thus disadvantaging that customer against its competitors. For example, a vertically integrated firm (e.g., a wholesaler/supermarket) may refuse to sell to a downstream competitor (e.g., independent supermarket) for the purpose of lessening its own downstream competition.

It is generally pro-competitive to allow supermarkets and wholesalers to choose with whom to do business. Negotiations between supermarkets and wholesalers vary by circumstance, and can fail for a variety of reasons that do not constitute an anti-competitive refusal to deal. In addition, a producer may refuse to deal with certain kinds of retailers (like discounters who don't provide needed services) to protect against free riders. A firm may also refuse to deal simply because its needs are satisfactorily handled by other contracts or arrangements.

However, some courts treat refusals to deal involving so-called "essential" products differently from other products. Special attention is also sometimes given when the dominant firm is vertically integrated, stops selling to competitors to which it had previously sold, or as a rule sells to non-competitors only.

In Colombia, refusal to deal is prohibited if done in retaliation for a firm's pricing policies, whether or not the refusing firm has market power and independent of the effects of this refusal (OECD 2009, pp. 24-25).

Case 4.5: Nadeau Poultry Farm Limited Refusal to Deal (Canada)

In 2008, Nadeau Poultry Farm Limited, a Canadian poultry processor, sued Groupe Westco Inc. and other poultry firms for refusal to deal. Westco had previously expressed an interest in purchasing Nadeau's plant but, after negotiations failed, Westco notified Nadeau that it would no longer supply Nadeau with live poultry for processing. Nadeau claimed that Westco's refusal to deal was intended to eliminate Nadeau as a competitor following an agreement between Westco and Olymel, a competitor of Nadeau.

The Canadian Competition Tribunal dismissed the case, since Nadeau had not established three key claims; namely, it had not shown that:

- There was insufficient competition among poultry suppliers and Nadeau was deprived of adequate live chickens;
- There was no shortage in live chickens that could have been sold to Nadeau; and
- The refusal to deal was likely to have an adverse effect on competition in the processed chicken market.

The decision was confirmed on appeal.

Reference: Canadian Court of Appeals/Cour d'appel fédérale Docket No. A-342-09, Citation 2011 FCA 188, June 2, 2011 Decision, `http://op.bna.com/atr.nsf/id/srin-8hlrrc/$File/chicken.pdf`, accessed July 22, 2012

Case 4.6: Matadero Vera Refusal to Deal (Argentina)

In 1982, the Argentinean Comisión Nacional de Defensa de la Competencia (CNDC) found Matadero Vera, a slaughterhouse operator and retail butcher, guilty of refusal to deal. Vera operated the only slaughterhouse in a small city in Santa Fe province. By refusing to accept cattle from A. Savant, a cattle raiser who also operated a retail butcher shop of his own and was thus Vera's downstream competitor, the CNDC found that Vera's act harmed consumers.

Reference: Coloma (2009)

4.3.4 Predatory Pricing

Predatory pricing is the act of pricing below cost in order to drive competitors out of business and create a long-run monopoly. In the short run, while prices are low, predatory pricing unambiguously benefits consumers but harms competitors. In the long run, it harm consumers if the predation is successful. To be successful, competitors must eventually exit, prices rise, and barriers to entry prevent old or new competitors from re-entering the mar-

ket. Economists question whether a predatory pricing strategy is realistically profitable as a general matter, partly because a hypothetical predator incurs substantial losses during the predatory period, losses that need to be fully recouped later on if the strategy is to be profitable on the whole.

Predatory pricing is considered an abuse in most jurisdictions. For example, it is explicitly listed as an abuse of dominance in Article 50 of Colombia's Decree 2153/1992 (OECD 2009, p. 24).

Jurisdictions using a rule-of-reason analysis rarely convict firms for predatory pricing without convincing proof that barriers to entry exist and that the predator can reasonably expect to recoup its short-run losses with a monopoly position in the future. Jurisdictions that outlaw the behavior *per se* can convict without any such proof of harm.

A significant challenge in predation cases is measuring costs accurately. The economic concepts of marginal or avoidable costs are most appropriate but are difficult to measure. Other, easier-to-measure costs, such as accounting measures of average variable costs or average costs, tend to be considerably higher than marginal or avoidable costs, so using them leads to high rates of misdiagnosed predatory pricing.

In addition, predatory-pricing allegations are often made early in the process, when the alleged predator is still allegedly pricing below cost. There is a challenge in forecasting not only prices but also entry and exit decisions by other firms years into the future to gauge the eventual effects of the act.

In the supermarket sector, the task of proving predatory pricing can be even more difficult than in other settings because there are potentially tens of thousands of products at issue. Competition occurs at the level of the basket, and supermarkets set prices and promotion schedules of products as part of an overall pricing strategy. Calculating the appropriate price-cost margin on any subset of products can be misleading. Supermarkets routinely sell individual items below cost — so-called "loss leaders" — in order to bring customers into the store where they also buy other, full-price, items. Loss leaders are generally not

anti-competitive and not realistically part of a long-term predation scheme.

Prices on some items may also fall below wholesale cost at certain times due to so-called "menu costs." Menu costs are the costs supermarkets incur by changing prices: the cost of printing and applying new labels, reprogramming electronic cash registers, and addressing errors and customer complaints. Menu costs can prevent supermarkets from changing prices as frequently as wholesalers, resulting in some prices falling below wholesale cost temporarily but with no predatory intent (Levy, Bergen, Dutta, and Venable, 1997).

Case 4.7: Wal-Mart Predatory Pricing (U.S.)

There was no dispute on the facts in the 1991 Arkansas lawsuit against Wal-Mart for selling some prescription drugs below cost (Case 3.1). The plaintiffs argued that selling any product below cost amounted to predatory pricing with the intent of foreclosing on competitors. Wal-Mart responded that a single product did not constitute a relevant market, and once any market basket of pharmaceuticals was considered, the price was always above cost.

Because the trial court agreed with the plaintiffs that a single pharmaceutical product could constitute an antitrust market, it then considered, under the rule of reason, whether Wal-Mart's intent was anti-competitive. The court considered circumstantial evidence including: the number, frequency, and extent of below-cost sales; the fact that below-cost pricing was part of Wal-Mart's stated policy (Wal-Mart publicly promised to "meet or beat the competition without regard to cost"); Wal-Mart's stated use of below-cost pricing (to bring more customers into its stores); Wal-Mart's in-store price comparisons with competitors; and the fact that Wal-Mart store in question sold some products and product lines at lower prices than other Wal-Mart stores. On the basis of these arguments, the trial court ordered Wal-Mart to increase its prices and awarded the plaintiffs treble damages of approximately $300,000.

On appeal, the Arkansas Supreme Court reversed the lower court's decision, finding that there was no evidence of intent to eliminate competition. The Court found there were pro-competitive explanations for Wal-Mart's policy, and that its "loss-leader" pricing strategy is not *prima facie* illegal.

Reference: Boudreaux (1996)

Case 4.8: Wal-Mart Predatory Pricing (Germany)

In 2000, a German court found Wal-Mart guilty of predatory pricing in its supermarkets and ordered Wal-Mart and two of its competitors to raise prices on 19 products.

Despite of finding no evidence of consumer harm, Ulf Boge, director of the German cartel office, was quoted in the New York Times saying that "The benefit to consumers is marginal and temporary, while the damage to competition through illegal obstruction of small and medium-sized companies is lasting and significant" (Andrews, 2000).

This decision was reversed on appeal in 2002, but ultimately sustained by Germany's Supreme Court later that year. The courts focused on the effect of Wal-Mart's low prices on competitors, rather than on consumers.

Reference: News reports

Case 4.9: Supermercado Makro Predatory Pricing (Argentina)

In 1997, a supermarket chain was accused by the Argentine Chamber of Stationery Stores of selling a stationery product below cost. There was no dispute about the facts of the case, only about whether the act was anti-competitive. Since Argentina follows the rule of reason in all cases, the plaintiffs had to show that the act harmed competitors or competition.

The CNDC found the act did not violate the law since the supermarket had a very low market share and did not intend to exclude competitors, nor did it have the ability to do so.

Reference: Coloma (2009)

Case 4.10: Prescription-Drug Price War (U.S.)

In 2006, Wal-Mart announced plans to sell a selected number of generic prescription drugs at $4 for a 30-day supply in the Tampa, Florida (U.S.) metropolitan market. The announcement was echoed within two days by Wal-Mart's main rival, Target. Following positive consumer reaction, Wal-Mart expanded the program to other drugs and other markets across the United States, and Target and many supermarket-operated pharmacies followed. Soon many supermarkets started offering a price of zero on some pharmaceutical drugs. While $4 may be above wholesale cost, $0 is clearly not. However, given the benefits to U.S. consumers and the lack of a realistic predation motive, there has been no antitrust action in this case.

Reference: News reports

4.3.5 Exclusive Dealing

Exclusive dealing refers to a requirement by a firm that a customer or supplier not to conduct business with the firm's competitors. For example, a wholesaler might prohibit a supermarket from purchasing from other wholesalers, or a large supermarket may prohibit a small wholesaler from transacting with any other supermarkets. An exclusive-dealing requirement may be an abuse of dominant position if such a requirement by a dominant firm harms competition or if the exclusive arrangement covers most of a market. However, if the excluded competitor can enter the market in some other way, an exclusive-dealing clause may not be anti-competitive.

Case 4.11: Coca Cola Exclusive Dealing (Mexico)

In 2000, Mexico's Comisión Federal de Competencia (CFC) investigated Coca Cola, the soft-drink market leader with about 70% of the Mexican market, for a clause in its contracts with thousands of small retailers forbidding those retailers to carry competing products. The CFC ruled in 2002 that these contracts were illegal and ordered Coca Cola to stop imposing exclusive-dealing clauses. The CFC upheld this decision following an appeal by Coca Cola later that year.

As is common in abuse-of-dominance cases, this ruling did not apply to smaller soft-drink suppliers: PepsiCo, a smaller player in the Mexican market, was allowed to continue using exclusive-dealing contracts.

Reference: News reports and OECD 2006, p. 271

There are also legitimate reasons for exclusive-dealing contracts. They are common when one or more parties must make investments as part of the contract and reasonably seek to ensure a fair return on their investments.

An example is advertising and cross-marketing. If advertising done by a manufacturer benefits the retailer by bringing in customers or otherwise increasing sales, the manufacturer has an interest in ensuring these customers do not purchase competing manufacturers' products once inside the store. An exclusive-dealing contract guarantees this. Likewise, a

Case 4.12: Iguatemi and SCN Exclusive Dealing (Brazil)

In 2004, the Brazilian Conselho Administrativo de Defesa Econômica (Administrative Council for Economic Defense, or CADE) found that Iguatemi, a shopping-center operator in São Paulo with a 30% market share, illegally forbade its retail tenants to open stores in competing shopping centers. The following year, it found that Shopping Centre Norte (SCN), an operator whose market share was 70%, also illegally required tenant exclusivity. CADE concluded the companies had substantial market power and that their intent was to harm competitors. Although this case is not specifically about supermarkets, this type of exclusive-dealing can come up with any retailer or wholesaler leasing space in shopping centers.

Reference: OECD 2006, p. 80

retailer that advertises specific products may want to protect its sales by requiring that the manufacturer not sell the same products through competing retailers.

Such advertising is common in retail industries, including the supermarket sector.

4.3.6 Tying and Bundling

Tying and bundling are two ways of requiring a customer to purchase one of a firm's products as a prerequisite for being able to buy another of the firm's products. They differ only in that, while bundling requires customers to purchase the two products in some fixed ratio, tying does not. Moreover, "pure bundling" requires the consumer to purchase the items together, whereas "mixed bundling" refers to the case where a consumer has the option of purchasing goods in a bundle or separately. Both tying and bundling are ubiquitous and often occur for procompetitive reasons, particularly when products tend to be consumed together (such as a flashlight and batteries).

While supermarkets pass through bundled or tied products as received from producers or wholesalers, they do little bundling in-house. Supermarkets often practice "discounted mixed bundling" such as two-for-one deals. While these pricing schemes are rarely of competitive concern, they may be anti-competitive if they encourages buyers to buy the bundle and makes it hard for competitors selling only one of the two goods to compete. As long as

Case 4.13: Toys "R" Us Exclusive Dealing (U.S.)

In 1996, the U.S. Federal Trade Commission accused Toys "Я" Us (TRU) of abusing its dominant position by:

1. Requiring several toy suppliers to limit sales to its competitors, in particular to warehouse clubs;
2. Requiring the right of first refusal on specials, exclusives, and clearance items sold to clubs;
3. Telling suppliers its new policy applied to all suppliers, and then communicating agreements to the policy to the other suppliers with the goal of establishing industry-wide recognition that toy suppliers were to provide TRU with better terms than its competitors; and
4. Enforcing its new policy with a clearinghouse for supplier complaints about other suppliers' conduct.

TRU's defense had three parts. First, it argued that its agreements with suppliers were a series of bilateral agreements and not a coordinated horizontal conspiracy. Second, it argued it lacked market power necessary for any abuse-of-dominance claim. Third, it argued that because it provided showrooms and free advertising for manufacturers, exclusive-dealing agreements were necessary to prevent retail competitors from free riding on its promotional activities.

When the case went to court, the U.S. Court of Appeals rejected TRU's arguments, and ordered TRU to cease its use of vertical agreements to restrict, limit, or put conditions on sales to its competitors. The Court found that suppliers did the bulk of advertising and that, to the extent that TRU provided marketing or advertising, it was suitably compensated.

Reference: FTC File No. 941 0040, Docket No. 9278, 2000, `http://www.ftc.gov/os/adjpro/d9278/index.shtm`, accessed July 22, 2012

supermarkets sell similar product bundles, this is unlikely to be a concern in this industry, but may be a problem when a dominant supermarket competes with specialty stores or limited-assortment stores.

4.3.7 Excessive Pricing

Some jurisdictions prohibit "excessive pricing" by a firm with substantial market power, even if it is pricing unilaterally. In the E.U., Article 102 of the TFEU prohibits "imposing unfair purchase or selling prices." There is no such provision in U.S. competition law, although many states prohibit "excessive," "unconscionable," or "unfair" prices after a natural disaster, sometimes restricted to particular industries like retail gasoline. Excessive-pricing accusations are heard periodically as an explanation for the high cost of food, but such cases have not been a major issue in the supermarket sector.

4.4 Vertical Contracts

4.4.1 Exclusive Territories

Exclusive territories refer to a agreement in which a seller agrees to sell only to a particular customer within a specific geographic range. For example, a retail chain may guarantee that a given franchisee be the only user of the brand name within a neighborhood. A typical agreement specifies a minimum guaranteed distance to the next nearest franchisee of the same banner. Alternatively, a manufacturer or a wholesaler may agree to give a supermarket exclusivity over a product in a given geographic area.

Exclusive-territory agreements are similar in some respects to market-division agreements, but unlike market division agreements, there are pro-competitive reasons for using them. For example, in a franchised chain, franchisees are often willing to invest more in

their franchises if they are guaranteed no immediate competition by other stores of the same brand.

While generally pro-competitive, exclusive territories can still potentially hide illegal market-division schemes. For example, competing firms, as franchisees, could coordinate through a so-called "franchisor," with the ultimate purpose of eliminating price competition and dividing territories between them.

Exclusive territories are not common in the supermarket sector, probably because franchising is not common in this sector. One reason for this is that most franchised chains offer a single product or a small set of closely related products and depend on this homogeneity to create a strong association between the brand and the product (Kosová and Lafontaine, 2010). However, some franchising agreements do exist in the supermarket sector, for example in Australia where a wholesaler has franchising agreements with smaller supermarket operators (ACCC 2008, p. 45).

4.4.2 Resale-Price Maintenance

Resale-price maintenance (RPM) occurs when a supplier specifies the retail (resale) price that a retailer must charge. There are two common forms: "minimum RPM," in which the supplier specifies the minimum price a retailer may charge; and "maximum RPM," in which the supplier specifies a maximum price.

In the U.S., RPM was long considered *per-se* illegal, but in recent years RPM has been evaluated under the rule of reason and is now often considered pro-competitive. In a 1997 case, the U.S. Supreme Court ruled on minimum RPM under the rule of reason; ten years later, maximum RPM also came in under the rule of reason.[1]

Other jurisdictions vary in their treatment of RPM. In Argentina, RPM is considered a violation of Section 1 of Law 25,156 (OECD 2006, pp. 12-13).

[1] The cases are State Oil Co. v. Khan, 522 U.S. 3 (1997) and Leegin Creative Leather Products, Inc. v. PSKS, Inc., 551 U.S. 877 (2007).

The change in treatment in the U.S. recognizes the pro-competitive reasons for RPM policies. Maximum RPM can eliminate a problem known as "double marginalization" by limiting markups along the supply chain. This may be of benefit to supermarket customers, although it may harm some firms along the supply chain if the RPM prevents them from charging the markup they otherwise would.

A minimum-RPM policy can serve to reduce a different problem known as a "free-rider problem," whereby quality of service and a knowledgeable retail sales presence is important. This is unlikely to be an issue in the supermarket sector.

Case 4.14: Over-the-Counter Drug RPM Abolition (U.K.)

In 2000, the U.K. Office of Fair Trading (OFT) challenged the minimum RPM used by pharmaceutical drug dispensors. Supermarket chains largely supported the action while stand-alone pharmacies and drug manufacturers opposed it. The Community Pharmacy Action Group argued that RPM abolition would drive many small pharmacies out of business, a prediction the Restricted Practices Court did not find compelling. When the Community Pharmacy Action Group withdrew from the case, the Court abolished minimum RPM.

Reference: Meikle (2001)

4.5 Buyer Power

Buyer power occurs when a buyer, usually by virtue of purchasing large quantities of product, has a superior bargaining position with suppliers. A supermarket chain with buyer power may be able to extract better terms and lower prices from suppliers. It may or may not pass the savings down to consumers, depending on competition at the retail level.

A supermarket's market power in the retail market (selling food to consumers in a particular location) does not necessary imply it has buyer power in purchasing food, nor does every supermarket with buying power have selling power. This is because retail competition is generally local in nature, but wholesale competition may be regional or national depending on the particular products.

Buyer power is common in the supermarket sector. In Australia, there are only three major buyers in the sector: two large supermarket chains and a wholesaler supplying most independent supermarkets (ACCC 2008, p. 325). In the U.K., suppliers claim they depend on supermarkets more than supermarkets depend on them, creating an uneven bargaining situation (Competition Commission, 2000, pp. 95-96).

Buyer power can be pro-competitive. When the supply side of the market is concentrated, buyer power can drive down wholesale prices and improve market efficiency. With sufficient competition at the retail level, lower wholesale prices lead to lower retail prices.

On the other hand, buyer power can have anti-competitive effects. One problem is the potential for *ex-post* negotiation and “hold-up.” Once a supplier has committed to supplying a dominant buyer and has made sunk investments into that relationship, the dominant buyer can use its position to force new terms on suppliers that, *ex ante*, would not have been agreeable. The buyer may demand a change in prices, credit terms, advertising terms, or other concessions. Complaints of this nature have arisen in the U.K. and Australia. A buyer with absolute power is a monopsonist, and as such may reduce the quantities it buys to maintain its low purchasing price.

Another concern is that a dominant buyer integrated into wholesaling could refuse to deal with, price discriminate against, or prey against smaller wholesalers in order to eliminate them from the market and monopolize the upstream market as well. The issues here are similar to the case of a dominant seller.

As buyer power generally results in lower prices, not higher ones, the outcome is fundamentally different from seller power. Abuses of dominant buyer position can be harder to detect and actions against large buyers must proceed with caution. Legal treatment depends on the extent to which a jurisdiction gives weight to supplier profits independently of consumer welfare or economic efficiency. Prior to the implementation of the 1999 competition law in Argentina, for example, several buyer-power disputes in that country were resolved in favor of suppliers, despite the fact that consumers were not harmed (Coloma, 2009).

Several other practices used by large buyers are controversial. Most-Favored Nation (MFN) clauses guarantees a buyer receives the supplier's best terms and "MFN-plus" clauses guarantee a buyer receives terms strictly better than any other. Such clauses generally lowers prices, but they can have the opposite effect if they discourage suppliers from making new price concessions to any supermarket to avoid triggering similar concessions to other supermarkets with MFN clauses.

Case 4.15: Corporación Supermarcados Unidos Abuse of Buyer Power (Costa Rica)

In 2002, Costa Rica's Comisión para Promover la Competencia (Commission to Promote Competition, or COPROCOM) accused Corporación Supermarcados Unidos (CSU), the largest supermarket chain in Costa Rica, with stores in all seven provinces, of abusing its buyer power. COPROCOM claimed:

- CSU had market power;
- CSU abused its market power;
- The acts did or could have the effect of displacing other agents in the market.

COPROCOM calculated CSU's retail market share at 60–80% of the Costa Rican supermarket sector, five times its nearest competitor. It argued CSU was protected by barriers to entry associated with investments in adequate locations, diversification of store formats, strategic alliances, and investment in advertising. COPROCOM further argued that a large number of suppliers, which sell most or all of their output to CSU, would not survive without it.

COPROCOM found that CSU required suppliers to provide information on third-party buyers, and included a "most-favored nation" clause in its contracts requiring suppliers to provide CSU with their best prices. CSU denied any actual damage to consumers.

However, COPROCOM position was that since the acts harmed suppliers, it was not relevant whether they also harmed consumers. CSU was ordered to stop these practices.

Reference: COPROCOM documents

Chapter 5: Mergers

5.1 Overview

Some supermarket and wholesaler mergers increase efficiency, lower costs, and benefit consumers by providing lower prices, higher quality, and greater selection. Others have no pro-competitive virtue and do little more than replicate the effect of an illegal collusive agreement.

Determining whether a merger's impact is pro- or anti-competitive requires a careful rule-of-reason analysis on a case-by-case basis. The majority of mergers cause little concern. Others, especially ones involving large or dominant firms, or mergers that consolidate supermarkets in small or isolated communities under common ownership, can be anti-competitive. Even a merger with no negative long-run effects may still be problematic if consumers are harmed sufficiently long before entry can take place. As noted earlier, in the U.S. new entry by supermarkets can take several years (Hanner, Hosken, Olson, and Smith, 2011).

A horizontal merger is a merger between two competitors or potential competitors of the same or similar products, e.g., a merger between two supermarket chains. Horizontal mergers receive the most attention from competition authorities. A vertical merger is a merger between a supplier and a buyer on the same vertical supply chain, e.g., a wholesaler and a supermarket. A conglomerate merger is any merger that does not fit into either the horizontal or vertical merger definition. Joint ventures are an alternative to mergers, allowing firms to combine efforts and coordinate decisions on certain projects while remaining separate competitors in other ways.

5.2 Pre-Merger Notification and Review

Because mergers have the potential to concentrate market power, in most jurisdictions the competition authority relies on a pre-merger review process. Merging parties that exceed certain revenue or asset thresholds are generally required to report to the authority, whereas small mergers generally are not. A merger involving multinational firms may need to be reviewed and approved by all jurisdictions in which the merging parties operate.

The pre-notification entails an administrative cost, but it can help avoid both costly litigation to reverse an anti-competitive merger *ex post* and the disruption caused to firms if a break-up is required later.

Once reviewed, a merger may be allowed, allowed with conditions, or challenged in court. In some jurisdictions, mergers of any size can be challenged and ordered to be broken up *ex post* as well.

In the U.S., the Hart-Scott-Rodino Antitrust Improvements Act of 1976 requires companies of sufficient size to notify the Federal Trade Commission and U.S. Department of Justice if they intend to merge. If the agencies believe the merger may have anti-competitive consequences, they may make a “second request” for additional information. Under the Hart-Scott-Rodino Act, once the FTC or DOJ issues a second request, the parties may not consummate their proposed transaction until they comply with the second request and then observe a second 30-day waiting period. Asset acquisitions are treated as stock acquisitions under the Celler-Kefauver Act of 1950. Over the ten-year period from 1998 to 2007, the FTC reviewed supermarket mergers pertaining to 153 antitrust markets and challenged at least some aspects of mergers in 134 of those markets (Hanner, Hosken, Olson, and Smith, 2011).

In Argentina, under Section 7 of Law 25,156, merger agreements must be reported when the sum of the two firms’ revenues in Argentina exceeds a certain threshold, with certain exceptions (e.g., if the merger is between a domestic company and a foreign company with no

pre-existing presence in Argentina) (OECD 2006, p. 23, Coloma 2009). Similar provisions exist in Mexico; pre-merger notification is required when the combined firm's revenues or assets exceeds certain thresholds or, in the case of an acquistion, when the acquired firm's stock exceeds a certain threshold value (International Competition Network , ICN).

Brazil's notification requirement changed with the enactment of Law 12529/2011, effective May 29, 2012. The previous law, Law 8884/94, included a revenue threshold for the larger party and a post-merger market share threshold of 20%. The new law consists of a revenue threshold of each of the parties separately, and notification is required when both firms exceed them (Salgado and de Morais, 2012).

In Colombia, Law 1340/2009, which amends Decree 2153/1992, exempts horizontal mergers from review when the combined market share of the two firms is less than 20%. It also gives the Superintendencia de Industria y Comercio (SIC) the authority to set revenue thresholds (Economist Intelligence Unit, 2012a; Organisation for Economic Co-Operation and Development (OECD), 2009).

The 2005 Law for the Defense and Promotion of Competition in Honduras requires all mergers to be reported to the Comisión para la Defensa y Promoción de la Competencia (CDPC), regardless of size, but the CDPC only actively reviews mergers satisfying certain revenue, asset, or market-share (20%) thresholds (Organisation for Economic Co-Operation and Development (OECD), 2012, p. 33).

El Salvador has fairly high revenue and asset thresholds and reviews very few mergers (OECD 2008, p. 20).

Some countries have no mandatory pre-merger notification requirement. Panama, for example, has optional notification (OECD 2010, p. 28). Notification in Chile is optional but companies that merge without approval of the Fiscalía Nacional Económica (FNE) and the Tribunal de Defensa de la Libre Competencia (TDLC) risk legal action after the fact (International Competition Network , ICN). Peru has no merger control at all except in the energy sector (Economist Intelligence Unit, 2011b).

5.3 Horizontal Mergers

5.3.1 Anti-Competitive Concerns

Potential Unilateral Effects

When two firms merge, an active competitor is removed from the marketplace. The sector becomes that much less competitive. All else equal, prices increase, particularly prices of the merged firm relative to the prices charged by the two merging parties prior to the merger. Other attributes can be negatively affected, including product quality, variety, freshness, and availability, as well as store hours, staff levels, cleanliness, safety, and the availability of other amenities (e.g., check cashing, delivery service).

If a merged supermarket chain closes some of its stores post-merger, there are other potential negative effects. Former customers of those stores, all else equal, become worse off because they have to shop elsewhere. To the extent that the closing of stores reduces competition in specific towns or neighborhoods, this may indirectly lead to even higher prices.

Collectively, these effects are known as "unilateral effects." Predicting the size and consequences of unilateral effects requires careful examination, as discussed in more detail later in this chapter.

Potential Coordinated Effects

In addition to unilateral effects, there is sometimes a concern that by eliminating a competitor a merger may increase the risk of collusion or other anti-competitive behavior by remaining competitors. Successful coordinated interaction requires (a) an agreement of terms of coordination, (b) the detection of cheating, and (c) punishment of those who deviate from the agreed upon terms. Without all three, coordination will not likely be successful (as all firms will have an incentive to cheat if undetected or unpunished).

Concern about such "coordinated effects" is greater the fewer the number of remaining firms in a market (because coordination is easier with a smaller number of parties) and if the acquired firm is a particularly aggressive competitor (a so-called "maverick" firm) and the purpose of the merger is to eliminate it.

Repositioning

Mergers can negatively affect consumer choice through repositioning of one or both of the merging parties. Suppose, for example, that two differentiated supermarket chains — a relatively high-end supermarket chain with fresh high-quality products on the one hand, and a limited-assortment lower-quality chain on the other — merge. If the merged firm chooses to unify these stores under a single quality level, some consumers who had previously had the choice between these two alternatives inevitably lose their most-preferred alternative.

Buyer Power

Horizontal mergers among supermarkets may also create or increase buyer power and negatively impact wholesalers, producers, and other suppliers. Both unilateral and coordinated effects come into play in such cases. If the merger raises the supermarket to a dominant position in the market, the discussion of abuse of dominance issues from Section 4.3 applies as well. However, buying groups formed by separate supermarkets are often procompetitive unless they collectively reduce output.

Preempted Entry

A merger lessens competition not only if it removes an active competitor from the market but also if it preempts what would otherwise have been a new competitor from entering. A merger of what appear to be two non-competing firms may in fact be a merger of two future competitors; while such a merger does not harm current competition, it does reduce future competition. For example, two supermarket chains with no current geographical overlap

might have entered one another's territories in the future; such geographic growth could be preempted by a merger. Similarly, a supermarket chain and another retail chain, for example a chain of drug stores, may not currently compete in any product markets but a merger could preempt one or both firms from expanding into products currently sold by the other chain.

The possibility of preempted entry creates a challenge for competition agencies, which must forecast, based on documentary and other evidence, whether, when, and at what prices the second firm would have entered but for the merger.

The U.S. approach to the preemption of imminent entry was established in a 1967 Supreme Court case. The Court ruled the acquisition of Clorox, the leading producer of household bleach in the U.S., by Proctor & Gamble (P&G), a leading producer of many household products but not bleach, was an anti-competitive horizontal merger due to P&G's likely entry into the bleach market but for the merger.

5.3.2 Pro-Competitive Justifications

Mergers as a Path to Growth

Supermarket chains can expand either by building new stores (so called "organic" growth) or by acquiring existing supermarkets. Davis (2010) lists seven U.S. supermarket mergers in which at least 100 stores changed ownership in a period of just three years (1997-1999). Growth by acquisition is often a fast track for building up market share and becoming a viable competitor in the marketplace. It can be pro-competitive when the acquiring firm is more efficient, more innovative, or more aggressive generally.

On the other hand, it can also be used to buy up and remove competitors instead of competing with them directly.

The mix of organic and acquisition growth varies across jurisdictions. In the U.S., growth by acquisition is common, but some large chains, including Wal-Mart, eschew it almost entirely. In Australia, growth by the two major supermarket chains has mostly been

organic (ACCC 2008, p. 421). When acquisitions do occur in Australia, they tend to be small and have raised little concern individually. The cumulative effect of these so-called "creeping acquisitions," however, can be important over time (ACCC 2008, p. 427).

Efficiencies

As technologies have increased the efficient scale of retailing and consumers gravitate to one-stop shopping options, the size and scale of efficient supermarket operations have grown.

A merger can be pro-competitive if it allows firms to become more cost efficient or provide better quality to consumers. Basker, Klimek, and Van (2012) show that mergers in the general-merchandise sector have increased the number of product lines carried by stores in both chains post-merger, creating one-stop shopping benefits for consumers. In the supermarket sector, economies of scale, density, and scope and the value of one-stop shopping are all potentially important.

Efficiencies in the supermarket sector can in some cases be large enough to counteract any competitive concerns from a merger. The challenge to competition authorities is to measure the expected size of these effects with any confidence (U.S. Department of Justice and Federal Trade Commission, 2010, p. 30). Post-merger costs are difficult to estimate in the pre-merger investigation stage, and while *ex-post* enforcement is possible in most jurisdictions, agencies are often wary of breaking up firms whose promises of efficiencies do not pan out.

If a merger were to result in a monopoly or duopoly, the U.S. Merger Guidelines say it would take extraordinary efficiencies to allow the merger, and there are no cases that have found such efficiencies to justify a merger to monopoly or duopoly

Sufficient Offsetting Competition

Even absent efficiencies, a merger does not result in higher prices if the market remains sufficiently competitive to defeat any attempt by the merged firm to raise prices. In the

supermarket sector, a merged firm's ability to raise prices depends on both the degree to which the merging parties were competitors (their similarities with regard to format, location, product selection, and other factors) and on the presence of other close competitors.

The 1997 Merger Guidelines give specific direction in the case of differentiated products: "Substantial unilateral price elevation in a market for differentiated products requires that there be a significant share of sales in the market accounted for by consumers who regard the products of the merging firms as their first and second choices, and that repositioning of the non-parties' product lines to replace the localized competition lost through the merger be unlikely" (U.S. Department of Justice and Federal Trade Commission, 1997, p. 23). To learn whether the products represent "second-choice" substitutes for one another, the Merger Guidelines call for obtaining "marketing surveys, information from bidding structures, or normal course of business documents from industry participants" (U.S. Department of Justice and Federal Trade Commission, 1997, fn 22, p. 23).

Negative effects of a merger could also be dampened if competing supermarkets reposition their products to fill gaps left by the merging firm.

Imminent Entry

Absent efficiencies or sufficient offsetting competition, a merger does not result in higher prices if the merged firm anticipates that any attempt to raise prices would be defeated by the entry of new competitors. Where entry is relatively likely, timely, sufficient, and induced by the merger, the merger is relatively unlikely to give rise to competitive concerns in the long run. Disputes over efficiencies or other justifications are less important when entry is expected.

How quickly can a new supermarket open for business? Potential barriers or delays in the supermarket sector include a shortage of suitable sites, the need to obtain permits and possibly rezone the site for commercial use, and the time and cost needed to build a new

store or renovate an existing one. Restrictive zoning rules can delay the process and increase the cost of entry.

Entry may come from new competitors to the area or from an expansion of existing ones. In the U.S., within-market expansion and contraction (the opening and closing of stores by existing market participants) currently accounts for twice as many store openings and closings as entry or exit by new supermarkets (Hanner, Hosken, Olson, and Smith, 2011). In jurisdictions where new entrants struggle to gain foothold imminent entry may be limited to expansion of existing competitors; in that case the financial positions of current competitors and their degree of substitutability with the merging firms can help predict the extent to which entry could counteract the merger's potential negative effects.

Finally, post-merger prices and outcomes also affect entry decisions. Perversely, the higher the prices and the less competitive the merged firm, the more likely is entry by a competing supermarket that can undercut those high prices.

Imminent Exit

In rare situations, acquisitions are allowed in some jurisdictions even though the merged firm stands to gain substantial market power post-merger and prices are expected to rise. The imminent-exit, or failing-firm, defense for a merger is invoked when the acquired firm would have, in the absence of the merger, exited in the very near future and there are no other, currently non-competing, buyers. In such a case, absent the merger, assets would be lost to the market; the merger keeps the assets in the market.

Claims that a supermarket chain plans to exit or that a given store in the chain is slated for closure are easy to make; they must be verifiable to be credible. U.S. agencies require evidence that the firm is unable to meet its financial obligations, cannot reorganize under U.S. bankruptcy law, and has made good-faith efforts to find an alternative buyer other than a competitor (FTC and DOJ, 2010, p. 32). In the case of a failing division or a group of stores, U.S. agencies require evidence that the stores in question contribute negatively

to the chain's cash flow, that the negative effect is not offset by efficiencies elsewhere, and that the chain has made good-faith efforts to find an alternative buyer other than a current competitor (FTC and DOJ, 2010, p. 32).

Case 5.1: Purchase by Tesco of Kwik Save Stores (U.K.)

In December 2007, the Office of Fair Trade approved the purchase of five former Kwik Save stores by supermarket chain Tesco. The OFT stated it was "satisfied in respect of four stores that the failing firm defence is met — for only the second time under the Act. In the case of those four stores, there were no credible bidders apart from Tesco." Purchase of the fifth store was also allowed even though one other, relatively weak competitor tendered an offer for it.

Reference: http://www.oft.gov.uk/shared_oft/mergers_ea02/361227/TescoStores2.pdf, accessed July 23, 2012

5.3.3 Remedies

In the supermarket sector, proposed mergers are often not challenged in court. More common in cases of disputed mergers is that the merging parties reach a settlement with the competition authority over appropriate remedies to dispel potential anti-competitive concerns. A common remedy is a requirement that the supermarket sell to its competitors a number of stores or distribution centers in specific areas where competition concerns are highest. In the U.S., the FTC normally requires that a buyer for the divested assets be named as part of the consent agreement since the identity of the acquirer is critical both to the continued successful operation of a store and to the competitive environment. Lags in divestiture due to delays associated with locating and getting approval of a buyer after a merger has been consummated often result in the deterioration of a store.

Case 5.2: Merger of Shaw's, Sainsbury, and Star Market (U.S.)

In 1998, J Sainsbury plc and Star Markets entered into a Stock Purchase Agreement, whereby J Sainsbury, operating through its Shaw's subsidiary, was to acquire all outstanding voting securities of Star Markets. Shaw's and Star Market were the second- and third-largest supermarket chains operating in the greater Boston metropolitan market. The FTC was concerned about competitive effects in eight Massachusetts cities and towns. The FTC allowed the acquisition on the condition that a list of agreed-upon stores be divested within a fixed timeframe.

The FTC order specified buyers for some of the properties, and required the merging parties to find buyers for others. In the former case, the timeframe for divestiture was short (ten days); in the latter, the parties had three months. The divestiture was to be finalized "absolutely and in good faith, at no minimum price, to an acquirer that receives the prior approval of the Commission and only in a manner that receives the prior approval of the Commission."

The order also specified a minimum time frame during which the merged chain was forbidden to compete, directly or indirectly (including through partnerships, subsidiaries, or full or partial acquisition) in any of the divested markets.

Reference: FTC File No. 991 0075, Docket No. C-3934, `http://www.ftc.gov/os/2000/04/shawscomplaint.pdf` and `http://www.ftc.gov/os/2000/04/shaws.do.pdf`, accessed July 11, 2012

Case 5.3: Merger of Albertson's and American Stores (U.S.)

In 1999, American Stores and Albertson's, then the second- and fourth-largest supermarket chains in the U.S., sought to merge. The Federal Trade Commission identified 57 cities and towns in which the two chains either competed or were expected to compete (based on existing land site purchases) absent the merger. The proposed remedy included the divestiture of all Albertson's *or* all American Stores supermarkets in 37 of the 57 markets to chains with no current operations in those markets. In the other markets, the FTC required that only profitable stores be divested. Divestiture was required within 30–120 days depending on the store.

One proposed buyer, Certified Grocers, sought to acquire 31 stores. The FTC agreed to the deal with the condition that Certified Grocers divest 20 of those stores within 90 days.

Reference: FTC File No. 981 0339, Docket No. C-3986, `http://www.ftc.gov/os/1999/06/alameristoresana.pdf`, accessed July 11, 2012

Case 5.4: Proposed Merger of Falabella and Distribución y Servicio (D&S) (Chile)

This is a rare case in which a merger proposal between two supermarket chains was rejected by a competition authority.

In 2007, at the time of the proposed merger, each of the two parties was a conglomerate: D&S operated supermarkets, travel agencies, shopping malls and credit cards, while Falabella operated in all of these sectors as well as in banking, department stores, and home-improvement stores.

Chile's National Economic Prosecutor (Fiscalía Nacional Económica, FNE) gave several reasons for opposing to the merger, rather than taking a more standard approach of requiring divestiture of problematic properties:

- Concentration in many geographic markets was already high: the HHI in all the relevant markets already exceeded 1,800, and the merger would have increased it more, in several markets to 8,000;
- Barriers to entry existed due to:
  - Increased importance of "one-stop shopping" which has blurred the distinctions between different types of stores, such as supermarkets and furniture stores, as each increasingly sells products traditionally in the realm of the other;
  - Delays due to zoning and permitting;
  - Long lags in firms' ability to recover fixed costs in the event they wish to exit;
- A merger would increase the parties' buyer power, harming suppliers.

Reference: Tribunal de Defensa de la Libre Competencia Resolution N° 24/2008

5.3.4 Traditional Types of Evidence of Merger Effects

Substitution Patterns and Diversion Ratios

Merger analysis often uses market shares and/or concentration as proxies for market power to establish the potential for harm. In the supermarket sector, as in other differentiated-goods industries, these initial screens can be supplemented by direct data-driven examinations of price and non-price effects post-merger. Data-driven analyses can significantly sharpen predictions of harm or offset or eliminate any concerns. How such analyses are performed in practice varies from matter to matter, even within the supermarket sector, and depends on the data available.

Data-driven analyses include own- and cross-price elasticities and diversion ratios that

gauge the extent to which a firm would lose sales by increasing prices or lowering service quality and to whom those sales would be lost. The latter matters: if a large portion of sales lost by one of the merging parties were captured by another merging party, post-merger price increases are more likely, independent of market shares. The 2010 U.S. Guidelines state "the agencies rely much more on the value of diverted sales than on the level of the HHI for diagnosing unilateral price effects in markets with differentiated products" (FTC and DOJ, 2010, p. 21).

Elasticities and diversion ratios are well-rooted empirical concepts in economics and can provide a more useful picture of potential price effects in the supermarket sector than can coarse measures of market shares and concentration. One limitation, however, is that they do not, in and of themselves, yield an exact prediction of how large price increases post-merger would be in practice. The evidence may be highly suggestive; it may point to large potential effects or negligible ones; but in many "close" merger matters, additional assumptions would be needed to connect the two.

Merger Simulations

Merger simulation is an analytical tool for estimating elasticities and diversion ratios directly from the data, and then simulating the price effects of a merger. It has the advantage of being based in economic theory, taking into account joint profit maximizing incentives, responses of competitors, demand responses of consumers, and easily handling expected cost efficiencies.

Merger simulation also has several disadvantages. The first is that data are rarely sufficient to estimate the full set of demand elasticities, so the analysis proceeds by making complex assumptions that can affect results in a material way. The assumptions are often arbitrary and difficult to test. Merger simulations have also been shown in some situations to be sensitive to the simulation algorithm itself (Knittel and Metaxoglou, 2011).

A second disadvantage is that merger simulations are price-based and do not handle non-price aspects of supermarket competition very well. A third is that simulation is a com-

putationally intensive technique, non-transparent and difficult to explain to non-specialists. Merger simulations are sometimes used in negotiations at the agency level but less commonly in courts. Like other complex techniques, merger simulations are best evaluated with caution.

5.3.5 Evaluation of Merger Effects through Direct Evidence

General Approach

U.S. authorities' approach to merger reviews in differentiated sectors, including supermarkets and other retail sectors, has shifted in recent years toward a more direct fact-based approach. Two recent U.S. merger cases — Staples/Office Depot and WholeFoods/Wild Oats — highlight this changed approach. In both cases, the Federal Trade Commission went beyond calculating elasticities and diversion ratios and sought real-world evidence of post-merger outcomes using pre-merger evidence.

The first case was the proposed merger of office-supply retailers Staples and Office Depot, and the second was a proposed merger between health-food chains Whole Foods and Wild Oats. These cases still contained a market definition exercise as has been standard and expected by the courts. However, in both cases, the analysis focused not on defining the market but on directly measuring price competition between the merging parties using current, real-world evidence.

Two methods that came up in the context of the Staples/Office Depot and Whole Foods/Wild Oats merger reviews were:

1. Cross-sectional benchmarking; and
2. Past-entry benchmarking.

The logic behind cross-sectional benchmarking is that if the expected competitive environment in a particular geographic market (city A) post-merger is likely to be comparable to the current competitive environment in another market (city B), then city B can provide a benchmark for what is likely happen in city A if the merger were to proceed.

The logic behind past-entry benchmarking is that if parties to the merger generated price decreases in the past when entering one another's markets, the size of those past price decreases can predict the size of the price increases that would occur if the effect of entry were reversed by the merger.

Other types of benchmarks use previous exits, such as store closings, and past mergers to predict outcomes in a pending merger. The available data in each case may limit the type of analysis, but whatever the situation, analysis can provide useful information about the possible consequences of a merger.

Cross-Sectional Benchmarking

One way to directly estimate the effect of a merger between two supermarket chains is to compare different outcomes (such as prices, quantities, or gross margins) in geographic markets in which only one of the chains currently operates with markets in which both firms operate ("overlap" markets). The idea is that markets in which only one firm currently operates represent what a current overlap market would look like if the merger were to take place. Large differences in prices between overlap and non-overlap markets suggest that when A and B merge, a substantial increase in price is likely.

Cross-sectional benchmarking was used in the proposed merger of Whole Foods and Wild Oats, described in detail in Case 5.6. It was also used in the supermarket sector in Australia (ACCC 2008, appendix D). The object in this case was not merger analysis but a better understanding of the local competitive pressures different types of stores (two large chain supermarkets and a number of other chain and non-chain supermarkets) impose on one another.

Whether or not the control markets are good benchmarks is key to interpreting the results. One concern is that markets in which a single firm has chosen to operate two stores may be different in important ways from markets in which two firms operate competing stores. For example, a single-firm market may be less populous or more distant from supply

sources than a multi-firm market. If these underlying differences, or "confounding factors," result in different operating costs in different markets then higher prices in monopoly markets may not accurately predict post-merger prices in more populous or lower-cost areas.

As a practical matter, these comparisons are only possible if the merging firms have sufficiently many overlap markets as well as non-overlap markets. In cases where insufficient overlap exists, a second-best solution is to compare overlap and non-overlap markets for other chains (or for one of the merger parties and a stand-in competitor) for which sufficient data are available.

Past-Entry Benchmarking

A variant of the above analysis involves looking at changes in prices (or quantities, margins, etc.) in markets previously entered by one of the current merging parties when the other merging party was an incumbent. The idea behind this type of analysis is that a merger is essentially a reversal of this earlier entry episode, so the effect of the merger may be a mirror image of the effect of entry. For example, if entry by one supermarket chain caused the incumbent chain to reduce its prices by 2% and competitive conditions are otherwise comparable, authorities may expect prices to increase by 2% if the two chains merge.

Past-entry benchmarking was used by the Federal Trade Commission in the investigation of the merger between Whole Foods and Wild Oats, as described in Case 5.6 and in the investigation of the proposed Staples/Office Depot merger, described in detail in Case 5.5.

This type of analysis was also performed in Basker and Noel (2009), which estimates the effect of Wal-Mart Supercenters' entry on supermarket prices in U.S. cities. By showing that Wal-Mart's entry had larger price effects on low-end, no-frills, supermarkets than on high-end supermarkets, the analysis revealed that low-end supermarkets are Wal-Mart's closest substitutes in the U.S. Lira, Rivero, and Vergara (2007) and Gómez-Lobo and González (2009) use similar approaches to estimate the effect of hypermarket entry in Chile.

Case 5.5: Merger of Staples and Office Depot (U.S.)

This case marks a change in the FTC's approach to retail mergers. While the case involves two office-supply stores, it has also affected the way the FTC analyzes supermarket mergers.

In the proposed 1997 merger of two giant office-supply discount chains, Staples and Office Depot, each with approximately 500 U.S. stores competing head-to-head in 42 metropolitan areas, U.S. competition authorities relied on "real world direct evidence — based on the defendants' pricing behavior" to predict the effects of a differentiated-goods merger. The FTC compared prices at Staples stores in four different types of markets: (1) markets in which Staples competed with both Office Depot and Office Max, the third large office-supply chain; (2) markets in which Staples competed with Office Depot but not Office Max; (3) markets in which Staples competed with Office Max but not Office Depot; and (4) markets in which Staples competed with neither Office Depot nor Office Max.

The FTC found prices dramatically higher in Staples-only markets relative to the other three types of markets and concluded that a Staples monopoly would find it profitable to increase prices by at least 5%. Since the degree of competition from general-merchandise and other stores that sold only limited office supplies did not have a meaningful impact on the office superstores' prices, the FTC concluded that the basket, or "cluster," of products supplied by office superstores was the relevant product market. It argued that the "unique combination of price, convenience and product offerings" distinguished office superstores from other stores selling office supplies.

Direct evidence on pricing was supplemented by traditional evidence of market concentration (HHI and market-share calculations). The FTC used the metropolitan area as the relevant geographic market. (This geographic market is probably larger than what would be appropriate for supermarkets since supermarkets require more frequent shopping trips than office-supply superstores and involve shorter commutes.)

A concern with the cross-sectional analysis used in this case is that markets in which Staples operates the only office-supply store(s) may be different in important ways from markets in which Staples competes with other chains. Not controlling for these differences can bias the estimated price effect of a local monopoly; worse, the direction of bias cannot be known in general. Reviewing this case, Manuszak and Moul (2008) attempt to correct for any underlying differences between these markets, and find even larger price differences between monopolized and non-monopolized markets once they do.

Reference: U.S. District Court for the District of Columbia, Case No.: 1:97CV00701, 1997, `http://www.ftc.gov/os/1997/04/pubbrief.pdf`, accessed July 22, 2012

Further reading: Baker (1999); Ashenfelter, Ashmore, Bakerand, Gleason, and Hosken (2006); Manuszak and Moul (2008)

As in the case of cross-sectional benchmarking, confounding factors can undermine the validity of the analysis. One concern in this type of analysis is that the markets in which the effect of entry by one of the firms has been observed recently may differ from markets where the two firms have competed side-by-side for a long time. The merger would affect both types of markets, but the prediction is made using only markets with recent entry. If one set of markets is, for example, smaller or more diverse with respect to consumer demographics (income, ethnicity, race, age, etc.), or has different operating costs, and if these factors play a role in the effect of a merger, the analysis could incorrectly predict the merger's effects. To avoid this problem it is important that the analysis control for these differences as much as possible. A second, related, concern is that markets that have recently experienced entry by a new supermarket chain may have undergone other changes, such as an increase in population or per-capita income, that may have independent effects on prices.

Past-Exit Benchmarking

Another source of direct evidence of merger effects comes from examining prior store closures. If documents or other evidence from the merging parties suggest that the merged chain plans to close some stores that compete head-to-head in the same geographic markets, the impact of such closures may be anticipated with data on the effects of prior store closures. The method is reliable only to the extent that past closures represent a suitable benchmark. If prior closures were due to unprofitable conditions, such as low demand or high costs, they may not have been strong competitors and not be representative of post-merger closings.

Consummated-Merger Benchmarking

The actual experience of other, similar, consummated mergers can also provide a direct benchmark. While every merger is different, and the choice of suitable benchmarks is critical, past experiences can inform future ones.

Case 5.6: Merger of Whole Foods and Wild Oats (U.S.)

The proposed 2007 merger of supermarket chains Whole Foods and Wild Oats represents the first time the FTC applied analysis of the type performed in the Staples/Office Depot case to supermarkets. The FTC opposed the merger on the grounds that Whole Foods and Wild Oats were not just any two supermarkets but competitors in a narrower market which the FTC termed PNOS (premium, natural, and organic supermarkets).

In a cross-sectional analysis similar to that described in Section 5.3.5, the FTC's expert, Murphy (2007, pp. 25-26) compared outcomes when two Whole Foods stores operated within five miles of one another and outcomes when one Whole Foods store and one Wild Oats store competed with one another in the same radius. By comparing outcomes when there were always two PNOS, but with different ownership patterns, the expert estimated the effect of a merger on prices, quantities, and margins while controlling for market structure.

In addition, Murphy (2007, pp. 19-21) provided evidence from entry benchmarking, using data covering a period of over three years during which five markets went from having only one firm (Wild Oats) to being overlap markets.

Although Whole Foods challenged the FTC's position that PNOS constituted a separate market from traditional supermarkets, and won an initial judgement from a U.S. District Court, the FTC prevailed on appeal.

References: FTC documents at `http://www.ftc.gov/os/adjpro/d9324/index.shtm` and `http://www.ftc.gov/os/caselist/0710114/0710114.shtm`, accessed July 25, 2012

As a general matter, the practice of examining post-merger outcomes from previously disputed mergers and comparing it with pre-merger evidence used in the investigation is an underutilized tool in many jurisdictions. Each merger investigation seeks, essentially, to predict an unknown future outcome. Comparing past investigations and subsequent outcomes can help agencies more accurately tune their predictions for future matters. For example, agencies can examine the range of pre-merger diversion ratios that have tended to result in poor consumer outcomes *ex post*.

Gómez-Lobo and González (2009) use pre- and post-merger data from Chile to estimate the actual impact of mergers that have already taken place. Huang and Stiegert (2009) use detailed pre- and post-merger price data from both the merging parties and their competitors in a single metropolitan area that experienced a large supermarket merger. Such analyses can be extremely helpful when future mergers come up for review.

Potential Complications

Several complications can arise when applying these techniques to supermarkets. For example, price effects can only be estimated if the companies do not engage in uniform pricing. If they do engage in uniform pricing and prices differ across the merging chains, there is a question of which firm's prices would prevail post merger or whether the merged firm would choose a different but still uniform price. In the latter case, the merger could indirectly affect consumers in areas with no change of store ownership, through uniform pricing policies.

Second, because supermarkets are differentiated and many factors other than price are important to consumers, the full effects of a merger can be difficult to measure, let alone predict. Selection, quality, cleanliness and other factors may all suffer. A reduction in the number of outlets may cause harm in and of itself, and dealings with manufacturers and wholesalers, including negotiations regarding prices, slotting allowances, and promotional considerations, may also be affected. Conversely, an acquiring supermarket may raise both

the price and the level of service of the acquired supermarket, so that price increases may not represent actual consumer harm.

Third, on a practical level, there may not be sufficient numbers of overlap and non-overlap markets, or markets with prior entry, to estimate the impact of the merger. In these cases the analysis may need to be less direct. One could, for example, estimate the impact of a merger of similar supermarket chains, but this alternative requires caution as to the quality of the benchmark.

While no method is applicable to every situation and each has potential flaws, direct measures of price and non-price effects are preferable to market-power proxies like market share or industry concentration in supermarket-merger evaluations. When multiple direct analyses are performed the combined results can shed further light on the expected unilateral effects of the merger.

5.4 Vertical Mergers

5.4.1 Overview

Vertical mergers are mergers between two firms along the same vertical supply chain, for example between a food wholesaler and a supermarket. Vertical mergers are different from horizontal mergers in that the merging firms provide "complementary" services — a wholesaler provides a wholesale service and the supermarket provides the retail service — rather than substitute products or services, as in horizontal mergers. Whereas mergers involving substitute products, all else equal, typically raise prices, mergers involving complementary products can lower them. For this reason vertical mergers tend to receive less scrutiny than horizontal ones.

5.4.2 Pro-Competitive Justifications

Eliminating Double Marginalization

Vertical integration can eliminate a problem known as "double marginalization" that would otherwise result in higher prices. When a wholesaler and a supermarket both have some (even small) market power, each sets a price that exceeds its cost. The problem is that the supermarket's cost includes the wholesaler's margin, so the retail price is higher than it would have been absent the wholesale margin. Economic theory shows that, all else equal, the markup of a single integrated firm is lower, and production higher, than that of two separate firms in the supply chain.

This issue is illustrated with an example by Australian Competition and Consumer Commission (ACCC) (2008):

> "Assume Metcash [the wholesaler] wished to reduce the wholesale prices it chargers independent retailers. However, as Metcash does not own the retailers, it cannot be assured that the retailers pass through all or most of the reduction in wholesale prices in lower retail prices. The smaller the pass through to retail prices, the smaller is the increase in the sales of independent retailers, and therefore the smaller the increase in market share achieved by Metcash. Uncertainty about this pass through may reduce the incentive of Metcash to follow such a strategy. A vertically integrated wholesaler and retailer does not face this concern" (p. 152).

Additionally, if there are economies of scope in providing wholesaling and retailing service together, the combined cost of the vertical chain falls, all else equal, and lowers prices further.

Systems Coordination

Vertical integration may also increase the efficiency of the distribution system by internalizing communication, coordinating network systems, increasing information sharing, and aligning

other practices. This coordination can improve the functioning of the combined firm.

An important example is in the adoption of new technology systems. In the supermarket sector, wholesalers and supermarkets benefit from using the same or compatible logistics systems to help keep tens of thousands of products, many of which are perishable, in stock. However, coordinating these systems across firm boundaries is not simple. Vertical integration provides an alternative to that.

The value of systems coordination has long been known. The U.S. supermarket sector overcame substantial coordination and communication problems, and concerns from the FTC, in the early 1970s when it successfully implemented a common scanning technology (Basker, 2012). The development required the simultaneous investment by supermarkets (installing scanners) and packaged-food manufacturers (redesigning product labels to incorporate barcodes) and involved unequal economic burden and uncertain profitability.

While coordination across horizontal competitors is often a problem, it can be pro-competitive when the goal is to establish a common technology standard. Absent a uniform standard, individual supermarket chains would likely have adopted different and incompatible systems, duplicating research and development, and increasing costs for all participants. Such coordination is rarely easy, however. In recent years, the adoption of a successor technology, radio-frequency identification (RFID), has been stalled due in part to the unequal burdens and benefits the investment entails (Basker, 2012).

Wal-Mart has famously circumvented some adoption issues due to its sheer size — taking advantage of its buyer power — by requiring its largest suppliers to use its company-developed software ("Retail Link") through which it shares store-level information to coordinate just-in-time deliveries (Basker, 2007). Such a system requires a significant investment and is impractical for many smaller chains.

5.4.3 Anti-Competitive Effects

Overview

Unlike horizontal mergers, vertical mergers rarely raise prices unless, by virtue of the merger, the merged firm becomes dominant at some level of the supply chain and abuses that position. A merger may also be anti-competitive if it preempts entry.

The U.S. Vertical Merger Guidelines note potential concerns if the merger creates "competitively objectionable" barriers to entry into either the upstream (wholesaler/producer) or the downstream (supermarket) market. This situation requires at least three conditions: that entry into just one market is impossible without entry into the other; that this vertical integration makes it substantially more difficult to enter at least one of the two markets; and that one of the markets is already sufficiently concentrated as to raise concerns about anti-competitive behavior (U.S. Department of Justice, 1984, pp. 26-27).

Abuse of Dominant Position

Most abuse concerns surround the firm's ability to leverage its monopoly position at one level of the chain to create a monopoly at another level. Examples include:

- **Price discrimination**: An integrated firm that is dominant in the upstream market charges a higher price to its downstream competitors than it would have had it not been integrated, for the purpose of squeezing its competitors' margins and monopolizing the downstream market; or in the opposite case, the integrated firm is dominant downstream and squeezes its upstream competitors' margins for the purpose of monopolizing the upstream market;
- **Refusal to deal**: An integrated firm that is dominant in the upstream market refuses to sell to downstream competitors for the purpose of monopolizing the downstream market; or in the opposite case, the integrated firm is dominant downstream and

refuses to buy from upstream competitors for the purpose of monopolizing the upstream market;

- **Predatory pricing**: An integrated firm uses profits from its dominant position to fund a predation campaign against its competitors at the level where it is not already dominant.

While a non-integrated firm could in principle use upstream power to anti-competitively harm downstream firms, or downstream power to harm upstream firms, it rarely has a motive to do so. Absent other considerations, eliminating customers downstream or eliminating suppliers upstream tends to harm the firm itself.

Case 5.7: Merger of Metcash and Franklin's (Australia)

In 2010, Metcash, the largest wholesaler supplying independent supermarkets in Australia, proposed to purchase Franklin's, an integrated wholesaler/retailer with 88 retail stores. Franklin's was a self-supplying chain, supplying only its own stores. Metcash was primary a wholesaler but also held a minority stake in some small supermarkets under a popular banner name (IGA). The two firms were competitors, to some extent, on both levels.

The Australian Consumer and Competition Commission (ACCC) considered three "counterfactuals" to the merger:

- Franklins continues operating its own supermarkets (counterfactual 1);
- Franklins sells to an alternative single buyer or consortium (counterfactual 2); or
- Franklins stores are sold individually or in groups and would continue to operate, but the wholesaling arm is closed (counterfactual 3).

The ACCC opposed the merger on the grounds that it would have substantially reduced or eliminated competition at the wholesale level, and because the 88 Franklin's supermarkets would no longer be a contestable buyer for a potential entrant into the wholesale market.

Metcash proceeded with the merger despite ACCC opposition and the case went to court. In March 2011, an Australian Federal Court judge ruled that the merger would not harm competition. Rather than considering competition between wholesalers affecting small supermarkets, the court focused on competition between vertically integrated supermarket chains, and found the merger would enable the vertically integrated Metcash compete more effectively with Australia's two large vertically integrated chains, Coles and Woolworth's.

References: Australian Competition and Consumer Commission (ACCC) (2010), `http://www.accc.gov.au/content/index.phtml/itemId/956978` accessed July 25, 2012, and news reports

Entry Preemption

The U.S. Vertical Merger Guideline also point out that a merger could be problematic when a vertical merger preempts entry by one of the merging firms into the (upstream or downstream) market in which the other party to the merger operates. In other words, the concern is that the merger may preempt one of the parties from vertically integrating through organic growth, and that either the threat of entry had, or actual entry would have had, a significant impact on competitive conditions in the market (U.S. Department of Justice, 1984, pp. 23-25).

5.5 Conglomerate Mergers and Hybrid Cases

Conglomerate mergers are mergers that do not fall into horizontal or vertical merger categories. The products are not close substitutes to one another and may either be complementary or unrelated.

Conglomerate mergers often do not give rise to competitive concerns but can be if what appears to be a conglomerate merger is actually a horizontal or vertical merger instead. For example, if one of the firms would have entered the market of the other but for the merger, the merger may harm future horizontal competition, as demonstrated in the matter of Proctor & Gamble and Clorox discussed in Section 5.3.1.

5.6 Joint Ventures

Joint ventures allow two or more firms to effectively merge one or more areas of their business while still competing in other areas. The parties to a joint venture often start a new company, partly owned by each, to handle the joint venture.

Joint ventures can be pro- or anti-competitive depending on the circumstances and should be reviewed on a case-by-case basis. Joint ventures can improve consumer outcomes

by allowing firms to produce a superior product or service relative to what each firm could do independently. On the other hand, joint ventures can simply eliminate the competition that would have occurred if both firms had sought to enter the market separately.

In some cases, supermarkets can use a joint venture to jointly negotiate price or other terms with suppliers. The Australian Consumer and Competition Commission (ACCC) notes that such agreements may be problematic under Australia's Trade Practices Act 1974 but could also benefit consumers and should be evaluated on a case-by-case basis (ACCC 2008, p. 10).

Case 5.8: Sinergia Purchasing Alliance (Mexico)

In 2003, three Mexican supermarket chains, Grupo Gigante, Organizacion Soriana, and Comercial Mexicana (CCM), with a combined market share a bit less than the market leader Walmex, agreed to form Sinergia, a purchasing alliance, to share technology and negotiate better deals with suppliers. The alliance was initially blocked by Mexico's Comisión Federal de Competencia (CFC) due to concerns that it would lead to price coordination. Following an appeal later that year, the CFC approved the joint venture on condition that no price coordination take place.

The CFC identified three markets/activities in which chain stores participate: wholesale purchasing; distribution from the chains' distribution centers to their stores; and retail sales at the stores. The CFC allowed Sinergia to participate in the first two markets, but not to coordinate on the third, maintaining competitive relationship among the three chains.

Reference: News reports and Organisation for Economic Co-Operation and Development (OECD) (2007)

Chapter 6: Other Concerns

6.1 Internationalization of the Latin American Supermarket Sector

Free-trade agreements such as the North American Free-Trade Agreement (NAFTA), the Southern Common Market (Mercado Común del Sur, or MERCOSUR), and the Dominican Republic–Central America Free Trade Agreement (DR-CAFTA) can shake up retail and supplier markets, with implications for industry structure and competitive behavior. Free access to import (for supermarkets) and export (for producers) markets means that, at least for commodities readily traded in these markets, particularly farm output, bargaining power diminishes on both sides of the market. In addition, cheaper grocery and non-grocery imports may advantage large supermarket chains that can take advantage of economies of scale and scope in importing (Reardon and Berdegué, 2002; Basker and Van, 2008).

Chavez (2002) argues that much of the development of the supermarket sector in Mexico, in particular the joint ventures of domestic and U.S. chains such as the 1991 Cifra/Wal-Mart joint venture that eventually became Walmex and the 1992 joint venture of Comercial Mexicana and Price-Costco Corp., as well as entry by foreign retailers such as HEB and Carrefour, are due to NAFTA-induced liberalization. Belik and dos Santos (2002) similarly argue that MERCOSUR's harmonization of customs regimes, reduction or elimination of tariffs and quotas, and deregulation of foreign direct investment, have allowed both regional and global multinationals to expand into the South American supermarket sector.

Closely related is the liberalization of capital markets, allowing for flows of foreign direct investments (FDI), which have been just as important as trade agreements (Reardon, 2003).

Imports can also come directly from U.S. retailers to consumers in Latin America. As noted in Section 3.5, online grocery shopping is not currently very common, but its popularity is likely to grow.

6.2 Regulation and Barriers to Entry

6.2.1 Overview

Many aspects of the supermarket sector, including food-safety and labor regulations, zoning, and pricing transparency impose additional costs on supermarkets and may act as barriers to entry. These regulations are rarely imposed or enforced by competition authorities, but they are relevant to market analysis to the extent that they limit or delay entry, increase costs, create opportunities for collusion, or affect competition in other ways.

6.2.2 Food-Safety Regulation

Hazards to food safety vary by product. For example, fresh fruits and vegetables are subject to hazards associated with pesticide residues and microbial contamination; meat, poultry, and seafood products are subject to microbial contamination, drug residues, parasites, and zoonotic diseases (transferable from animals to humans) such as the ebola virus. Many products, including manufactured food products, may be adulterated with cheaper substances (Unnevehr, 2000).

These problems with food safety are common across all markets, but may be exacerbated in hotter climates, locations with poor infrastructure and limited refrigeration facilities, or locations with poor food-safety regulation. Although there is no central database of food-safety infractions, the U.N. Food and Agriculture Organization (FAO) compiled data from the U.S. Food and Drug Administration (FDA) on import detentions by source origin and reason over a one year period from July 1996 to June 1997. The FAO report found that

the primary reasons for detentions of food imports from Latin America were filth (32%) and pesticide residues (21%), followed by mold (12%) and heavy metals (11%). Imports from Asia were also most likely to be detained due to filth (35%), followed by microbial contamination (16%), low acid in canned foods (14%), and labeling issues (11%) (Food and Agriculture Organization, 2003).

While many jurisdictions have food-safety regulations, supermarkets often have their own, stricter, standards on quality, safety, and consistency intended to protect their reputations (Reardon and Berdegué, 2002). This is an example of supermarket chains using their buyer power to change supplier behavior (Havinga, 2006). Iacovone, Javorcik, Keller, and Tybout (2011) provide evidence that Walmex's entry and expansion changed supplier practices in Mexico.

Balsevich, Berdegué, Flores, Mainville, and Reardon (2003) argue that a greater emphasis on quality is one reason why supermarkets in Latin America have switched from using traditional wholesalers, which had their own market power and did not provide adequate standards, to dedicated wholesalers and distribution centers in which the supermarkets had more control. In this way, the need for buyer power driven by food-safety and -quality standards has helped shape the upstream market.

6.2.3 Labor Regulation

Labor regulation can take on many forms. Some of the most common forms in Latin America are job-security regulation (Heckman and Pagés-Serra, 2000) and minimum wages. Although these regulations legally affect both formal- and informal-sector workers, they may have a greater impact on supermarkets than on their traditional informal-sector competitors due to unequal enforcement. Using data from several Latin American countries, however, Maloney and Nuñez Mendez (2003) find that wages in the informal sector are much more likely than those in the formal sector to fall below the official minimum wage, but the minimum wage affects the distribution of wages in the informal sector as well by providing a reference point

for wages. This finding is confirmed by several studies, including Lemos, Rigobon, and Lang (2004) for Brazil and by Gindling and Terrell (2005) for Costa Rica. This result may not generalize to other forms of labor-market regulation, however.

Labor-market regulation can translate into higher consumer prices and may even change the competitive landscape. The research on this question is fairly limited, but Aaronson (2001) found that, in the U.S., minimum-wage increase lead to higher prices in fast-food restaurants.

6.2.4 Zoning

Many municipalities have imposed restrictions on the location and size of retail developments, typically with the intent of protecting the character of a town or a town center, reducing the (negative) externalities associated with development, limiting urban sprawl and congestion, etc. Such regulations are now common in the U.K. and Australia, for example. These regulations differ by jurisdiction, but generally include some provisions that limit edge-of-town and out-of-town development.[1] Zoning can also interact with restrictive covenants attached to sites sold or leased by supermarket chains that prohibit those lots from being used for food retailing, and exclusive-dealing clauses imposed by supermarket chains leasing space in shopping centers that prohibit the owner/developer of the shopping center from leasing to any other supermarket (Competition Commission, 2000; Australian Competition and Consumer Commission (ACCC), 2008).

There are potential pro-competitive reasons for such clauses. Ensuring that a supermarket can recuperate investments made during an initial period of low revenues may, in fact, increase the supermarket's willingness to incur up-front costs.

[1] Evidence on negative externalities of development is surprisingly lacking. Pope and Pope (2012) find that entry of a Wal-Mart Supercenter in the U.S. (generally at the edge of town) increases housing values both within 0.5 miles of the store location and in the next ring of 0.5–1 miles from the store location. No effect, positive or negative, was found further out.

Under some circumstances, concentrating retailers in a narrow area could promote competition by reducing search and transport costs for price-comparing consumers (ACCC 2011, p. 223). This is due to the removal of an important dimension on which retailers generally differentiate. It is not clear, however, whether removing this ability to differentiate is good for consumers, who may now need to travel further to reach the closest supermarket.

Despite these potentially pro-competitive effects, zoning restrictions can and do create barriers to entry and, on, the whole, reduce the competitiveness of this sector. The U.K. Competition Commission (Competition Commission, 2000) found that restrictions on the location and size of supermarkets created barriers to entry and calls the conditions imposed by the planning system "by far the severest constraint on a grocery retailer seeking to enter [. . .] or expand" (Competition Commission, 2000, p. 51), particularly for large one-stop supermarkets. The Australian Competition and Consumer Commission similarly concluded that "planning laws which limit the availability of retail space by definition restrict opportunities for new supermarkets to establish within areas" (ACCC 2008, p. 193) and may create local monopolies (ACCC 2011, p. 222). Such restrictions may not be common to other jurisdictions but these potential side effects are worth considering when planning constraints are issued.

Consistent with these concerns, Bertrand and Kramarz (2002) find in French data that entry regulation increased retail concentration and Schivardi and Viviano (2011) find that entry regulation in Italy is associated with higher retail prices charged to consumers. Sadun (2012) finds that local zoning regulations that limit the availability of edge-of-town locations for "big box" stores in the U.K. have inadvertently hurt independent retailers by increasing the attractiveness of smaller in-town locations for chains.

6.2.5 Opening Hours

If regulations limiting hours and days of operation exist, they may apply to all retailers or only a subset; in some cases small retailers and retailers in certain locations are exempt.

Such regulations prevent supermarkets from differentiating themselves along a dimension that is potentially important to consumers, as some consumers would generally be willing to pay higher prices in return for what they perceive as more convenient shopping hours.

6.2.6 Item-pricing Laws

Stores that have scanners do not generally put price stickers on individual items marked with Universal Product Codes (UPCs), but in some jurisdictions, laws require a price tag or sticker on every individual item in the store, rather than just on the shelf on which the items are stocked. Item-pricing laws can help protect against abuses related to mis-pricing and make price comparisons easier for consumers. At the same time, Bergen, Levy, Ray, Rubin, and Zeliger (2008) find that U.S. item-pricing laws are associated with large costs that can increase prices by $0.20-0.25 per item.

Related to this issue, regulation on how products are labeled and priced, such as "unit-pricing" discussed in Section 6.3.2, may also increase operating costs, including menu costs, which apply when prices are changed.

6.3 Deceptive Trade Practices

6.3.1 Legal Environment

Deceptive trade practices are often governed by separate laws and may or may not be enforced by the same agencies as competition and merger law. In the U.S., the FTC prosecutes unfair and deceptive trade practices and in Canada the Competition Bureau does so. In Argentina, conduct such as inaccurate or misleading product labeling, false and misleading advertising, and misleading country-of-origin labeling are covered by Commercial Loyalty Law 22,802 and enforced by the National Bureau of Interior Trade (OECD 2006, p. 22), and in Mexico,

consumer-protection laws are enforced by a separate agency, the Procuraduría Federal del Consumidor (PROFECO) (OECD 2006, p. 284).

6.3.2 Packaging and Labels

In a survey of the history and impact of the 1966 U.S. Fair Packaging and Labeling Act, Wall (2002) notes some of the issues that can arise with respect to labeling and packaging:

- **Fake discounts**: Labels or advertisements that indicate a supermarket is selling a product at a discount over the "regular" price when, in fact, the regular price applies rarely if at all;
- **Changes in package sizes**: Slight reductions in package sizes, without any change in price, that may be invisible to consumers and substitute for more transparent price increases;
- **Quantity surcharges**: Prices that are higher, on a per-unit basis, for larger packages than for small ones.

All of these and similar issues can be addressed with legislation and regulation. Some jurisdictions have laws specifying when a product can be marked "on sale." To address the "quantity-surcharge" problem and general pricing transparency, many jurisdictions, including the EU, Australia, and several U.S. states require price labels to include a per-unit (such as per liter or per kg) price as well as a total price. This practice is known as "unit pricing."

6.3.3 Store Scales and Scanners

At the store level, common abuses are false scale readings for variable-weight purchases (e.g., meat or fresh produce priced by weight) and shelf prices that do not correspond to scanner prices.

To investigate the prevalence of over-charging due to scanner programming, the U.S. Federal Trade Commission conducted two studies, in 1996 and 1998 respectively. In the 1996 study, seven states inspected prices in department, discount, drug, and other stores,

including 113 food stores, comparing posted and advertised prices with those charged by scanning cash registers. They found that food stores charged correct prices about 96.5% of the time, and in the remaining cases they under-charged slightly more often than they over-charged. When mis-pricing did occur, undercharges were slightly larger on average than overcharges. These findings suggest that human error, not deception, was the primary cause of mis-pricing (Federal Trade Commission, et al., 1996). The 1998 study included 555 food stores in 37 U.S. states and territories, and found that errors had decreased. Now approximately 98.5% of all charges were correct. Among the incorrect charges, overcharges were slightly more common than undercharges, but also slightly smaller (Federal Trade Commission and National Institute of Standards and Technology, 1998).

Of course, scanner inaccuracies need not always be innocent, and countries adopting scanners in their supermarket operations may find it useful to conduct similar tests and impose penalties on stores with low accuracy rates or where overcharges dominate undercharges in frequency or as a percentage of price.

6.4 Consumer Resistance to Market Change

In many countries, the transition from small food stores to large supermarkets and hypermarkets has not been without controversy. For at least a century, since the earliest chains started expanding, smaller, less-efficient retailers and their supporters have lobbied against the introduction of larger, more efficient supermarkets and hypermarkets. The rapid rise of chains, particularly of The Great Atlantic and Pacific Tea Company (A&P) in the 1920s, prompted accusations of chains "paying low wages, not contributing to their communities, taking money out of communities, paying fewer taxes than local merchants, and turning America into 'a nation of clerks'" (Ross, 1984, p. 247). In recent years in the U.S. the concerns have repeated themselves, this time with respect to Wal-Mart, the world's largest retailer, which has been gaining market share at the expense of traditional supermarket

chains.

Despite the reservations of small-food store owners and their supporters, many consumers have been flocking to large-format supermarkets and hypermarkets to take advantage of the lower prices and greater selection the larger chains often offer. Foster, Haltiwanger, and Krizan (2006) show empirically that the productivity growth in the retail sector in the U.S. during the 1990s was entirely due to the expansion of large chains and the exit of small firms.

Chapter 7: Towards a Comprehensive Competition Policy

The growth of the supermarket sector promises better quality at lower prices to consumers, but oversight to maintain competitiveness and minimize the negative effects of increased concentration in the sector is critical. Competition agencies find themselves striking a delicate balance between the benefits of concentration, including economies of scale, scope, and density on the one hand, and the costs of concentration exemplified in higher market power that can ultimately increase the prices that consumers pay on the other.

Good data are critical to proper evaluation of the supermarket sector. Competition agencies typically get administrative data directly from firms in the markets under investigation. In the U.S., the FTC and DOJ obtain data from merging parties, companies under investigation for anti-competitive behavior, and other firms — for example, competitors that are potentially impacted by the merger or behavior — by virtue of their civil authority. These agencies may issue both subpoenas for existing documents and Civil Investigative Demands (CIDs) for new documents, data, oral testimony, and depositions. Agency personnel often interact directly with company officials to obtain information and clarification about the data.

Competition agencies also use outside data, both public and private, to supplement their analyses. For example, they may purchase survey data from marketing and market-research firms or commission surveys to inform decisions on geographic market boundaries, the degree to which consumers view various supermarkets as substitutes, or the degree to which consumers are affected by specific pricing practices by supermarkets in their area.

A third source of data in the United States and most other countries is the central statistics agency (e.g., the U.S. Census Bureau or the Mexican Instituto Nacional de Geografia y Estatistica). These statistics are typically collected through a combination of annual surveys, less-frequent censuses of all business establishments, and administrative data such as tax and employment records. In the U.S., federal law prohibits the Census Bureau from sharing underlying establishment- and firm-level data with other agencies (including the Federal Trade Commission and the Internal Revenue Service) to maximize the accuracy of the data, but aggregated statistics on sector size, market concentration, firm size distribution, etc., can be used by competition authorities.

In addition to industry statistics maintained by a central statistical agency, it can be useful to occasionally do retrospective analyses of cases that had previously been decided by the competition authority. For example, consider a merger that was allowed to go through (possibly with remedies) and, with the benefit of hindsight, analyze the effect of the merger. Analyses of this type form the groundwork for consummated-merger benchmarking used to predict the effects of future mergers, as discussed in Section 5.3.5.

When there is evidence that a pricing practice by a particular supermarket chain is harmful to consumers, remedies must be proportionate to the offense. Some remedies may have unintended consequences that cause more harm than the original offense. The U.K. Competition Commission, which considers several common pricing strategies described in this white paper to be anti-competitive, concluded that the remedies would be either ineffective or expensive to implement out of proportion to the original offense. Examples of such conclusions include every instance in which the Commission was concerned that retail margins were too high, too low, or too variable both over time and across products, including non-uniform pricing and selective price promotions (Competition Commission, 2000). The ACCC similarly notes that “Recommendations should be proportional to any competition problems identified” (ACCC 2008, p. 6).

A unified approach to mergers in the supermarket sector requires an understanding that,

because supermarkets are inherently differentiated — with respect to location, selection, service quality, inventory levels, and more — no two supermarkets are ever perfect substitutes for one another. Every merger involves the potential for harm by reducing the shopping options available to consumers. In general, the extent of such harm cannot be deduced without careful case-by-case analysis. At the same time, the potential benefits of a merger also need to be evaluated with respect to the merging parties' ability to reduce operating costs or improve quality by combining operations. Where cost savings come in part from increased buyer power — the combined chain's ability to extract lower prices from producers or wholesalers — there may be a tension between the interests of consumers and the interests of upstream firms. This tension needs to be resolved by policymakers in order to allow the supermarket sector to achieve efficiencies that will benefit all market participants.

Abbreviations and Acronyms

A&P	The Great Atlantic and Pacific Tea Company
ACCC	Australian Consumer and Competition Commission
AMC	Antitrust Modernization Commission (U.S.)
CADE	Conselho Administrativo de Defesa Econômica (Administrative Council for Economic Defense, Brazil)
CC	Competition Commission (U.K.)
CCM	Comercial Mexicana
CDPC	Comisión para la Defensa y Promoción de la Competencia (Honduras)
CFC	Comisión Federal de Competencia (Federal Competition Commission, México)
CNDC	Comisión Nacional de Defensa de la Competencia (National Competition Commission, Argentina and Dominican Republic)
COPROCOM	Comisión para Promover la Competencia (Commission to Promote Competition, Costa Rica)
CR	Concentration ratio
CSU	Corporación Supermarcados Unidos
DOJ	Department of Justice (U.S.)
DR-CAFTA	Dominican Republic–Central America Free Trade Agreement
EDLP	Every-day low pricing
EU	European Union
FAO	United Nations Food and Agriculture Organization
FDA	Food and Drug Administration (U.S.)
FNE	Fiscalía Nacional Económica (National Economic Prosecutor, Chile)
FTC	Federal Trade Commission (U.S.)
HHI	Herfindahl-Hirschman index
Indecopi	Instituto Nacional de Defensa de la Competencia y de la Protección de la Propiedad Intelectual (National Institute for the Defense of Competition and Protection of Intellectual Property, Perú)
KVI	Known-value items or key-value items
MERCOSUR	Mercado Común del Sur (Southern Common Market)
MFN	Most-favored nation
NAFTA	North American Free-Trade Agreement
OECD	Organization for Economic Cooperation and Development
OFT	Office of Fair Trading (U.K.)
P&G	Proctor & Gamble
PNOS	Premium, natural, and organic supermarkets

PROFECO	Procuraduría Federal del Consumidor (Federal Prosecutor for Consumers (Federal Prosecutor for Consumers, México)
RFID	radio-frequency identification
RPM	Resale-price maintenance
SIC	Superintendencia de Industria y Comercio (Colombia)
SKU	Stock-keeping unit
SSNIP	Small but significant and non-transitory increase in price
TDLC	Tribunal de Defensa de la Libre Competencia (Chile)
TFEU	Treaty on the functioning of the European Union
TIA	Tiendas Industriales Asociadas
TRU	Toy "Я" Us
UPC	Universal Product Code

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References

Aaronson, D. (2001) “Price Pass-through and the Minimum Wage,” *Review of Economics and Statistics*, 83(1), 158–169.

Australian Competition and Consumer Commission (ACCC) (2008) *Report of the ACCC Inquiry into the Competitiveness of Retail Prices for Standard Groceries*. `http://www.accc.gov.au/content/index.phtml?itemId=838251`, accessed June 22, 2012.

——— (2010) “Statement of Issues — Metcash Trading Limited - proposed acquisition of Franklins Supermarket Business,” 22 September.

——— (2011) “Economic Structure and Performance of the Australian Retail Industry,” Productivity Commission Inquiry Report no 56, `http://www.pc.gov.au/projects/inquiry/retail-industry/report`, accessed June 22, 2012.

Antitrust Modernization Commission (AMC) (2007) *Report and Recommendations.*

Andrews, E. L. (2000) “Germany Says Wal-Mart Must Raise Prices,” *New York Times*, September 9.

Ashenfelter, O., D. Ashmore, J. B. Bakerand, S. Gleason, and D. S. Hosken (2006) “Empirical Methods in Merger Analysis: Econometric Analysis of Pricing in *FTC v. Staples*,” *International Journal of the Economics of Business*, 13(2), 265–279.

Baker, J. B. (1999) “Econometric Analysis in *FTC v. Staples*,” *Journal of Public Policy and Marketing*, 18(1), 11–21.

Balsevich, F., J. A. Berdegué, L. Flores, D. Mainville, and T. Reardon (2003) “Supermarkets and Produce Quality and Safety Standards in Latin America,” *American Journal of Agricultural Economics Papers and Proceedings*, 85(5), 1147–1154.

Basker, E. (2007) “The Causes and Consequences of Wal-Mart’s Growth,” *Journal of Economic Perspectives*, 21(3), 177–198.

——— (2012) “Raising the Barcode Scanner: Technology and Productivity in the Retail Sector,” *American Economic Journal: Applied Economics*, 4(3), 1–29.

Basker, E., S. Klimek, and P. H. Van (2012) “Supersize It: The Growth of Retail Chains and the Rise of the “Big Box” Store,” *Journal of Economics and Management Strategy*, 21(3), 541–582.

Basker, E., and M. Noel (2009) “The Evolving Food Chain: Competitive Effects of Wal-Mart’s Entry into the Supermarket Industry,” *Journal of Economics and Management Strategy*, 18(4), 977–1009.

Basker, E., and P. H. Van (2008) "Wal-Mart as Catalyst to U.S.-China Trade," unpublished paper, University of Missouri.

Belik, W., and R. R. dos Santos (2002) "Regional Market Strategies of Supermarkets and Food Processors in Extended MERCOSUR," *Development Policy Review*, 20(4), 515–528.

Bergen, M., D. Levy, S. Ray, P. H. Rubin, and B. Zeliger (2008) "When Little Things Mean a Lot: On the Inefficiency of Item-Pricing Laws," *Journal of Law and Economics*, 51(2), 209–250.

Bertrand, M., and F. Kramarz (2002) "Does Entry Regulation Hinder Job Creation? Evidence from the French Retail Industry," *Quarterly Journal of Economics*, 117(4), 1369–1413.

Binham, C. (2011) "Supermarkets Fined £50m for Price Fixing," *Financial Times*, August 10.

Bitto, E. A., L. W. Morton, M. J. Oakland, and M. Sand (2003) "Grocery Store Access Patterns In Rural Food Deserts," *Journal for the Study of Food and Society*, 6(2), 35–48.

Bloom, P. N., G. T. Gundlach, and J. P. Cannon (2000) "Slotting Allowances and Fees: Schools of Thought and the Views of Practicing Managers," *Journal of Marketing*, 64(2), 92–108.

Boudreaux, D. J. (1996) "Predatory Pricing in the Retail Trade: The Wal-Mart Case," in *The Economics of the Antitrust Process*, ed. by M. B. Coate, and A. N. Kleit, pp. 192–215. Kluwer Academic.

Brown, C., and T. Borisova (2007) "Understanding Commuting and Grocery Shopping Using The American Time Use Survey," Paper presented at the International Association of Time Use Research XXIX Conference, Washington D.C., 17-19 October 2007.

Carrefour (2010) "Carrefour Stores Worldwide," `http://www.carrefour.com/docroot/groupe/C4com/Pieces_jointes/Autres/NETWORK2010.pdf`, accessed June 15, 2012.

Cencosud (2012a) *Annual Report.*

——— (2012b) "Prospectus: Common Stock in the Form of Shares or American Depositary Shares," `http://www.cencosud.cl/archivos_fck/files/Final%20Prospectus.PDF`, accessed July 5, 2012.

Chamberlin, E. H. (1950) "Product Heterogeneity and Public Policy," *American Economic Review Papers and Proceedings*, 40(2), 85–92.

Chavez, M. (2002) "The Transformation of Mexican Retailing with NAFTA," *Development Policy Review*, 20(4), 503–513.

Coloma, G. (2009) "The Argentine Competition Law and its Enforcement," in *Competition Law and Policy in Latin America*, ed. by E. M. Fox, and D. D. Sokol, pp. 93–116. Hart Publishing.

Competition Bureau Canada (2012) *Enforcement Guidelines: The Abuse of Dominance Provisions (Sections 78 and 79 of the Competition Act).* Draft. http://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/vwapj/Abuse-Dominance-2012-03-22-e.pdf/$file/Abuse-Dominance-2012-03-22-e.pdf, accessed August 24, 2012.

Competition Commission (2000) *Supermarkets: A Report on the Supply of Groceries from Multiple Stores in the United Kingdom.* http://www.competition-commission.org.uk/rep_pub/reports/2003/481safeway.htm#full, accessed June 22, 2012.

Courtemanche, C. J., and A. Carden (2012) "Competing with Costco and Sam's Club: Warehouse Club Entry and Grocery Prices," National Bureau of Economic Research Working Paper 17220.

Davis, D. E. (2010) "Prices, Promotions, and Supermarket Mergers," *Journal of Agricultural and Food Industrial Organization*, 8, article 8.

Doms, M. E., R. S. Jarmin, and S. D. Klimek (2004) "Information Technology Investment and Firm Performance in U.S. Retail Trade," *Economics of Innovation and New Technology*, 13(7), 595–613.

Economist Intelligence Unit (2011a) "Brazil: Competition and Price Regulations," *Economist Intelligence Unit*, 4 October.

——— (2011b) "Peru: Competition and Price Regulations," *Economist Intelligence Unit*, 5 July.

——— (2012a) "Colombia: Competition and Price Regulations," *Economist Intelligence Unit*, 2 February.

——— (2012b) "Ecuador: Competition and Price Regulations," *Economist Intelligence Unit*, 5 January.

Ellickson, P. B. (2006) "Quality Competition in Retailing: A Structural Analysis," *International Journal of Industrial Organization*, 24(3), 521–540.

——— (2011) "The Evolution of the Supermarket Industry From A&P to Wal-Mart," unpublished paper, Simon School of Business, University of Rochester.

Ellickson, P. B., and P. L. E. Grieco (2013) "Wal-Mart and the Geography of Grocery Retailing," *Journal of Urban Economics*, 75, 1–14.

Ellickson, P. B., and S. Misra (2008) "Supermarket Pricing Strategies," *Marketing Science*, 27(5), 811–828.

Elzinga, K. G., and T. F. Hogarty (1978) "Utah Pie and the Consequences of Robinson-Patman," *Journal of Law and Economics*, 21(2), 427–434.

European Commmision (2004) *Guidelines on the Assessment of Horizontal Mergers*. under the Council Regulation on the Control of Concentrations between Undertakings (2004/C 31/03).

Federal Trade Commission (2003) *Slotting Allowances in the Retail Grocery Industry: Selected Case Studies in Five Product Categories*. FTC Staff Study.

Federal Trade Commission, and National Institute of Standards and Technology (1998) "Price Check II: A Follow-up Report on the Accuracy of Checkout Scanner Prices," http://www.ftc.gov/reports/scanner1/scanners.shtm, accessed July 25, 2012.

Federal Trade Commission, Technology Services of the National Institute of Standards and Technology, State of Florida, State of Michigan, State of Tennessee, State of Vermont, State of Wisconsin, and Commonwealth of Massachusetts (1996) "Price Check: A Report on the Accuracy of Checkout Scanners," http://www.ftc.gov/reports/scanner1/scanners.shtm, accessed July 25, 2012.

Food and Agriculture Organization (2003) "The Importance of Food Quality and Safety for Developing Countries," http://www.fao.org/trade/docs/LDC-foodqual_en.htm, accessed July 28, 2012.

Food Marketing Institute (2012) "Supermarket Facts: Industry Overview 2010," http://www.fmi.org/research-resources/supermarket-facts/median-total-store-size-square-feet, accessed June 17, 2012.

Foster, L., J. Haltiwanger, and C. J. Krizan (2006) "Market Selection, Reallocation and Restructuring in the U.S. Retail Trade Sector in the 1990s," *Review of Economics and Statistics*, 88(4), 748–758.

Gilbert, R., and D. Rubinfeld (2010) "Revising the Horizontal Merger Guidelines: Lessons from the U.S. and the E.U.," Competition Policy Center, UC Berkeley.

Gindling, T., and K. Terrell (2005) "The Effect of Minimum Wages on Actual Wages in Formal and Informal Sectors in Costa Rica," *World Development*, 33(11), 1905–1921.

Glandon, P., and M. Jaremski (2012) "Sales and Firm Entry: The Case of Wal-Mart," unpublished paper, Kenyon College and Colgate University.

Gómez-Lobo, A., and A. González (2009) "Mergers, Prices and Concentration in the Supermarket Industry: The Case of Chile," in *Competition Law and Policy in Latin America*, ed. by E. M. Fox, and D. D. Sokol, pp. 391–410. Hart Publishing.

Hanner, D., D. Hosken, L. M. Olson, and L. K. Smith (2011) "Dynamics in a Mature Industry: Entry, Exit, and Growth of Big-Box Grocery Retailers," Federal Trade Commision Working Paper 308.

Havinga, T. (2006) "Private Regulation of Food Safety by Supermarkets," *Law & Policy*, 28(4), 515–533.

Heckman, J. J., and C. Pagés-Serra (2000) "The Cost of Job Security Regulation: Evidence from the Latin American Labor Markets," *Economía*, 1(1), 109–154.

Holmes, T. (2011) "The Diffusion of Wal-Mart and Economies of Density," *Econometrica*, 79(1), 253–302.

Huang, K., and K. Stiegert (2009) *Evaluating a Supermarket Merger Event: The Case of Copps and Kohl's in Madison WI*. FSRG Monograph Series #21.

Iacovone, L., B. S. Javorcik, W. Keller, and J. Tybout (2011) "Supplier Responses to Wal-Mart's Invasion of Mexico," National Bureau of Economic Research Working Paper 17204.

Infante, M., and F. Solano (2009) "Economic Analysis of the Dominican Republic Competition Law," Latin American and Caribbean Law and Economics Association (ALACDE) Annual Papers.

International Competition Network (ICN) (2007) "Merger Notification and Procedures Template: MexChileco," *International Competition Network*.

——— (2008) "Merger Notification and Procedures Template: Mexico," *International Competition Network*.

Knittel, Christopher, R., and K. Metaxoglou (2011) "Challenges in Merger Simulation," *American Economic Review Papers and Proceedings*, 101(3), 56–59.

Kosová, R., and F. Lafontaine (2010) "Survival and Growth in Retail and Service Industries: Evidence from Franchised Chains," *Journal of Industrial Economics*, 58(3), 542–578.

Kroger (2012) "Operations: Manufacturing List," `http://www.thekrogerco.com/operations/operations_manufacturing_list.htm`, accessed July 26, 2012.

Lagakos, D. (2009) "Superstores or Mom and Pops? Technology Adoption and Productivity Differences in Retail Trade," unpublished paper, Arizona State University.

Lemos, S., R. Rigobon, and K. Lang (2004) "Minimum Wage Policy and Employment Effects: Evidence from Brazil [with Comments]," *Economía*, 5(1), 219–266.

Levy, D., M. Bergen, S. Dutta, and R. Venable (1997) "The Magnitude of Menu Costs: Direct Evidence from Large U.S. Supermarket Chains," *Quarterly Journal of Economics*, 12(3), 791–825.

Lira, L., R. Rivero, and R. Vergara (2007) "Entry and Prices: Evidence from the Supermarket Sector," *Review of Industrial Organization*, 31(4), 237–260.

Maloney, W. F., and J. Nuñez Mendez (2003) "Measuring the Impact of Minimum Wages: Evidence from Latin America," in *Law and Employment: Lessons from Latin American and the Caribbean*, ed. by J. J. Heckman, and C. Pagés, pp. 109–130. University of Chicago Press.

Manuszak, M. D., and C. C. Moul (2008) "Prices and Endogenous Market Structure in Office Supply Superstores," *Journal of Industrial Economics*, 56(1), 94–112.

Masoudi, G. (2007) "Some Comments on the Abuse-of-Dominance Provisions of China's Draft AntiMonopoly Law," Remarks presented to the UIBE Competition Law Center Conference on Abuse of Dominance: Theory and Practice, `http://www.justice.gov/atr/public/speeches/225357.pdf`, accessed August 24, 2012.

Mattson, S. (2005) "Mexico's Chedraui says acquisition 'very big' risk," *Reuters*, March 11.

Meikle, J. (2001) "£300m Slashed off Drugs as Price Fixing Abandoned," *Guardian*, May 16.

Murphy, K. M. (2007) "Expert Report (Public Version) in the case Federal Trade Commission, Plaintiff, v. Whole Foods Market, Inc., and Wild Oats Markets, Inc.," United States District Court for the District of Columbia, Civ. No. 07-cv-01021-PLF, FTC File No. 071 0114, `http://www.ftc.gov/os/caselist/0710114/0710114.shtm`, accessed June 29, 2012.

Organisation for Economic Co-Operation and Development (OECD) (2006) *Competition Law and Policy in Latin America: Peer Reviews of Argentina, Brazil, Chile, Mexico and Peru*. OECD.

——— (2007) *Policy Roundtables: Vertical Mergers*. OECD.

——— (2008) *El Salvador: Peer Review of Competition Law and Policy*. OECD.

——— (2009) *Colombia: Peer Review of Competition Law and Policy*. OECD.

——— (2010) *Competition Law and Policy in Panama: A Peer Review*. OECD.

——— (2011) *Competition Law and Policy in Chile: Accession Report*. OECD.

——— (2012) *Competition Law and Policy in Honduras: A Peer Review*. OECD.

Pashigian, B. P., and B. Bowen (1994) "The Rising Cost of Time of Females, the Growth of National Brands and the Supply of Retail Services," *Economic Inquiry*, 32(1), 33–65.

Pope, D. G., and J. C. Pope (2012) "When Walmart Comes to Town: Always Low Housing Prices? Always?," National Bureau of Economic Research Working Paper 18111.

Reardon, T. (2003) "Capital Market Liberalization and the Latin American Agrifood System," in *Trade Reforms and Food Security: Conceptualizing the Linkages*, pp. 127–135. FAO/Commodity Policy and Projections Service Commodities and Trade Division, `ftp://ftp.fao.org/docrep/fao/005/y4671e/y4671e00.pdf`.

Reardon, T., and J. A. Berdegué (2002) "The Rapid Rise of Supermarkets in Latin America: Challenges and Opportunities for Development," *Development Policy Review*, 20(4), 371–388.

Reardon, T., J. A. Berdegué, C. P. Timmer, D. Mainville, L. Flores, R. Hernandez, and D. Neve (2005) "Links Among Supermarkets, Wholesalers, and Small Farmers in Developing Countries: Conceptualization and Emerging Evidence," unpublished paper, Michigan State University.

Ross, T. W. (1984) "Winners and Losers under the Robinson-Patman Act," *Journal of Law and Economics*, 27(2), 243–271.

Sadun, R. (2012) "Does Planning Regulation Protect Independent Retailers?," Harvard Business School Working Paper 12-044.

Safeway Inc. (2008) *Safeway Fact Book*. Pleasanton, CA.

Salgado, L. H., and R. P. de Morais (2012) "The New Brazilian Antitrust Law: Beyond the Basics," *Boletín LatinoAmericano de Competencia*, 31.

Schivardi, F., and E. Viviano (2011) "Entry Barriers in Retail Trade," *Economic Journal*, 121(551), 145–170.

Stigler, G., and R. Sherwin (1985) "The Extent of the Market," *Journal of Law and Economics*, 28(3), 555–585.

Sudhir, K., and V. R. Rao (2006) "Do Slotting Allowances Enhance Efficiency or Hinder Competition?," *Journal of Marketing Research*, 43(2), 137–155.

SuperValu (2012) *Annual Report*. Minneapolis, MN.

Unnevehr, L. J. (2000) "Food Safety Issues and Fresh Food Product Exports from LDCs," *Agricultural Economics*, 23(3), 231–240.

U.S. Census Bureau (2005) *Economic Census: Retail Trade*. U.S. Government Printing Office, Washington, DC.

——— (2012) "Economic Census: Retail Trade," `http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml`, accessed September 15, 2012.

U.S. Department of Justice (1984) *Merger Guidelines*. Issued: June 14, 1984.

——— (2012) "Antitrust Division Leniency Program," `http://www.justice.gov/atr/public/criminal/leniency.html`, accessed July 20, 2012.

U.S. Department of Justice and Federal Trade Commission (1997) *Horizontal Merger Guidelines*. Issued: April 2, 1992; Revised: April 8, 1997.

——— (2010) *Horizontal Merger Guidelines*. Issued: August 19, 2010.

Varela, M. J. (2012) "The Costs of Growth: Estimating Entry Costs During Rollouts," unpublished paper, University of Arizona.

Wal-Mart Stores, Inc. (2012a) "Wal-Mart Guatemala Fact Sheet," `http://walmartstores.com/download/2002.pdf`, accessed June 22, 2012.

——— (2012b) "Walmart de México y Centroamérica Fact Sheet," http://www.walmex.mx/assets/files/QuienesSomos/en/FactSheet/Fact%20Sheet%20May%202012.pdf, accessed July 9, 2012.

——— (2012c) "Walmex: Distribution," http://www.walmex.mx/en/our-company/distribution.html, accessed July 9, 2012.

Wall, E. C. (2002) "A Comprehensive Look at the Fair Packaging and Labeling Act of 1966 and the FDA Regulation of Deceptive Labeling and Packaging Practices: 1906 to Today," unpublished paper, Harvard Law School.

Weg, A. (2009) "Per Se Treatment: An Unnecessary Relic of Antitrust Litigation," *Hastings Law Journal*, 60.

Werden, G. (2003) "The 1982 Merger Guidelines and the Ascent of the Hypothetical Monopolist Paradigm," *Antitrust Law Review*, 71.