

Analyzing the Impacts of Antitrust Laws and Enforcement on Small Business

by

**Innovation & Information Consultants, Inc.
Concord, MA**

for



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Release Date: July 2008

This report was developed under a contract with the Small Business Administration, Office of Advocacy, and contains information and analysis that was reviewed and edited by officials of the Office of Advocacy. However, the final conclusions of the report do not necessarily reflect the views of the Office of Advocacy.

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Innovation & Information Consultants, Inc, Concord, MA 01742
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Purpose

The study investigates how antitrust laws and enforcement in the retail grocery and timber industries affect small firms.

Overall Findings

Looking at two industries (retail grocery and timber), the researchers find that, independent of the type of enforcement activity, the number of small grocery retailers declined over time. In the timber industry, the vertically integrated dominant firm hoarded the input of its small competitors downstream, forcing their exit.

Highlights

- In retail grocery markets where merger and acquisition activity prompted antitrust enforcement, the number of small firms declined regardless of the type of enforcement activity.
- Small retail grocery firms did not benefit in markets when the FTC required a divestiture of stores to offset large increases in post-merger concentration.
- Small firm success or lack thereof in the retail grocery industry was less a function of mergers and acquisitions and more the result of the entry and growth of mass merchandisers and the efficiency of large supermarket chains, even in markets where divestiture was targeted to benefit small firms.
- Anticompetitive behavior by a vertically integrated timber industry monopsonist contributed to a decline in small business sustainability in the Pacific Northwest sawmill industry; however, industry-wide trends support the conclusion that macroeconomic

factors were equally important in reducing the net number of small firms operating in the industry.

- The decline in the number of small timber industry firms was also attributable to efficiency gains and the vertical integration of the dominant firm.
- The uncertainty over ongoing anticompetitive behavior and antitrust litigation in the Pacific Northwest sawmill industry did not deter new entry, although the net number of small firms declined.

Scope and Methodology

The researchers used a case study approach to analyze the impact of antitrust activity on small business. They looked at businesses in NAICS 445110 (retail grocery), NAICS 113000 (forestry and logging), and NAICS 321000 (sawmills). They measure market concentration using firm market share, expressed by the Herfindhal-Hirshmann Index (HHI), in either a four-firm ratio or an eight-firm one. They compare concentration before and after the activity, allowing for some lag.

This report was peer-reviewed consistent with Advocacy's data quality guidelines. More information on this process can be obtained by contacting the director of economic research at advocacy@sba.gov or (202) 205-6533.

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Executive Summary

A significant body of literature exists on the economic importance of antitrust laws and enforcement for firms operating in the United States. However, a key tenet of the U.S. antitrust legislation is to protect competition, and not competitors. Less is known about the antitrust laws' impacts on small businesses, including whether antitrust enforcement activity aids small firms in competing against larger counterparts. A review of antitrust enforcement across industries provides an opportunity to assess the impacts of antitrust laws on small firms. We employ a case study approach to assess small firm reaction to changes in market concentration and antitrust enforcement. We select two industries that have had significant antitrust enforcement activity in recent years: retail groceries and timber.

In the retail grocery analysis, we compile market share data and examine measures of market concentration for several geographic regions where supermarket mergers and acquisitions changed the competitive landscape. In particular, we focus on changes in market concentration and the impact on small firms competing in the same region. In several cases, the Federal Trade Commission (FTC) required divestitures of stores to promote competition. We assess whether small firms benefited from the antitrust enforcement or, alternatively, if other exogenous factors influenced the change in the net number of small firms. We rely on third-party market share and store count data, as well as on publicly available information from the Small Business Administration Office of Advocacy, the Census Bureau, the Bureau of Economic Analysis, and the Bureau of Labor Statistics.

In the timber analysis, we investigate antitrust impacts on small firms from a dominant buyer standpoint. Several small sawmills filed antitrust lawsuits against a large, dominant firm, alleging anticompetitive buying practices that resulted in decreased profitability for the small firms. We compile data on the number of small firms operating in the relevant geographic market and investigate whether the antitrust legislation had negative consequences for the small firms. In addition, we use price data and exogenous macroeconomic factors to assess whether the change in the number of small firms is more likely driven by exogenous factors, rather than by the antitrust law enforcement. We rely

on state-level price data and publicly available data from the Census Bureau and the Bureau of Economic Analysis.

Key findings include:

- In retail grocery markets where merger and acquisition activity prompted antitrust enforcement, the number of small firms declined regardless of the type of enforcement activity;
- Small retail grocery firms did not benefit in markets when the FTC required a divestiture of stores to offset large increases in post-merger concentration;
- Small firm success or lack thereof in the retail grocery industry was less a function of mergers and acquisitions and more the result of the entry and growth of mass merchandisers and the efficiency of large supermarket chains, even in markets where divestiture was targeted to benefit small firms;
- Anticompetitive behavior by a vertically integrated timber industry monopsonist contributed to a decline in small business sustainability in the Pacific Northwest sawmill industry; however, industry-wide trends support the conclusion that macroeconomic factors were equally important in reducing the net number of small firms operating in the industry;
- The decline in the number of small timber industry firms was also attributable to efficiency gains and the vertical integration of the dominant firm; and
- The uncertainty over ongoing anticompetitive behavior and antitrust litigation in the Pacific Northwest sawmill industry did not deter new entry, although the net number of small firms declined.

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Analyzing the Impacts of Antitrust Laws and Enforcement on Small Business

1. Introduction

U.S. small businesses are an integral component of the domestic economy, representing more than 99 percent of U.S. businesses, and employing more than 50 percent of the domestic work force.¹ As a result, policymakers at the federal, state, and local levels endeavor to encourage small business development across a wide spectrum of U.S. industries. Significant empirical and qualitative research studies document the economic contributions of small businesses to the overall domestic economy. A key component of the continued growth and stability of small businesses is their ability to effectively compete with larger, more established firms on a fair and reasonably level playing field. In recent years, many industries have become increasingly concentrated largely as a result of mergers and consolidation.

The Office of Advocacy of the U.S. Small Business Administration (Advocacy) contracted with Innovation & Information Consultants, Inc. (IIC, Inc.) to perform an analysis of the impact of mergers and antitrust activity on small business. In this report, we explore how small firms react to changes in market dynamics resulting from industry mergers and/or antitrust enforcement actions by the government.

United States antitrust legislation dates back to 1890, when the enactment of the Sherman Act sought to prohibit and restrict contracts, combinations and conspiracies in the restraint of trade, and monopolization. Over the past century, Congress has further added to the U.S. antitrust statutes with supplemental antitrust legislation.² State laws also exist to complement federal antitrust legislation.³ The central tenet of U.S. antitrust laws is to promote competition, rather than to protect competitors per se.⁴ Antitrust

¹ The data are based on U.S. Census Data concerning the number, employment, and annual payroll and receipts for employer firms and establishments by firm size. The 99 percent represents the small employer firm share of employer firms.

² Examples include the Clayton Act (1914), Robinson-Patman Act (1936), Celler-Kefauver Act (1950), and Hart-Scott-Rodino Act (1976). Lin, et al. (2000) contains an excellent review of U.S. antitrust laws and activity.

³ Typically, the State Attorney General will oversee state-level antitrust enforcement.

⁴ Indeed, in the landmark *Brown Shoe Co. Inc. v. United States*, 370 U.S. 294 (1962), the Supreme Court highlighted legislation that served to protect competition, not competitors, and the desire to restrain mergers only to the extent that such combinations may tend to lessen competition.

enforcement does not specifically address the role of small businesses operating in the competitive market.

One would expect that small businesses would embrace the antitrust laws as part of the arsenal protecting them against large business dominance of the market, but in fact small businesses have not always had a harmonious relationship with antitrust regulators. Foer (2001) argues that over time the relationship between small businesses and antitrust regulators has deteriorated.⁵ The author lays out the theoretical framework for the role of antitrust enforcement in protecting small businesses. Antitrust enforcement:

- restrains market power on the supply side, keeping down the prices of goods and services small businesses depend upon;
- restrains market power on the buying side, keeping small businesses from being crushed by the need to sell to a single dominant buyer—that is, a monopsony;
- restrains competitors from unfairly blocking entry into a market or acting in an unfairly oppressive manner; and
- restrains market power in vertical relations.

However, Foer also notes a difference between theory and practice, citing that antitrust enforcement is objectively much more important to small firms than they seem to realize. Foer's theoretical framework allows us to formulate general research questions including the following:

- How do small businesses perceive and react to the potential exercise of market power by larger firms?
- What barriers to entry do small businesses face in industries with dominant firms?
- What role do mergers and acquisitions play in increasing the market power of large firms vis-à-vis small firms?

⁵ For example, Foer (2001) notes that the small business community views the FTC as lacking a willingness to exercise its authority under the Robinson-Patman Act. Under the antitrust statutes, small businesses are not entitled to a level playing field in terms of efficient operation, but are entitled to fair and equitable treatment when larger firms employ anticompetitive practices designed to suppress competition.

- How do small businesses react to antitrust enforcement activity by federal and state antitrust regulators?

The central hypothesis we sought to examine in this study was whether small businesses suffered negative impacts from increases in market concentration because of merger and acquisition activity or abuse of market power, and whether antitrust enforcement could alleviate the potential negative impacts. We measure negative impacts by examining the change in the net number of small firms (a differential encompassing static firm count that incorporates the net change from births and deaths) compared with changes in market concentration or potential abuse of market power by dominant firms.

Two primary areas are of concern regarding the assessment of our central research hypothesis. First, the issue of causality raises serious concerns, especially in assessing conclusions from empirical analysis. Second, determining the relationship, if any, between antitrust activity and a change in the small business competitive landscape resulting from changes in market concentration is complex: these conditions do not exist in a vacuum. A decline in the number of small firms in a market with increasing concentration may be the result of factors other than the change in market concentration. The lack of sufficient data to capture all potential effects of an increase in market concentration and of antitrust enforcement precluded the use of robust econometric models to gauge the causality and relative importance of merger activity and antitrust enforcement on small firms. The fact that significant exogenous factors influence the formation, growth, or decline of small firms is an important caveat.⁶ To help facilitate the analysis of our research hypothesis, we review the relevant economic literature to provide an overview of important underlying theoretical concepts related to industrial organization, market definition, antitrust, and firm performance in Section 2.

We employ a case study approach to assess our central research hypothesis. The case studies focus on the retail grocery (NAICS 445110) and timber (NAICS 113

⁶ Efforts to test our central hypothesis using econometric models were hindered by lack of sufficient data to compensate for the multitude of different variables that influence small business sustainability. Given the often local nature of markets, insufficient data on a local level resulted in econometric results that raised questions concerning the specifications of the models. As a result, the lack of robust results did not allow us to assess the specific contribution of the merger activity and antitrust enforcement to the change in the number of small firms.

(forestry and logging) and NAICS 321 (sawmills)) industries.⁷ We base our selection of industries on data availability and quality of market information related to potential antitrust implications. Each industry contains significant antitrust enforcement activity, which allowed us to examine the impact on small firms. In Section 3, we discuss our research design, including variable definitions, and provide further detail on the selection of the retail grocery and timber/sawmill industries. We include a review of relevant economic literature that supports the selection of these particular industries, including economic issues related to our research hypothesis.

In Section 4, we present the results of our case study approach for the selected industries. The results focus on specific issues related to each industry that involves small firms. In the retail grocery analysis, we investigate the impacts of mergers and acquisitions leading to changes in market concentration. Furthermore, we introduce the role of antitrust enforcement in promoting competition and assess the potential impacts on small firms resulting from governmental involvement. In the timber/sawmill industry, we examine potential small firm impacts resulting from potential market abuse by a dominant firm. Several antitrust lawsuits were filed as a result of the dominant firm conduct and provide insight into the reaction of small firms. In Section 5, we discuss the results of our case study analysis and provide a summary of potential policy implications and avenues of further research.

2. Literature Review

Industrial organization is the economic field that examines how markets are organized, the structure, firm behavior, and industrial performance. An extensive literature documents the theoretical foundations of industrial organization, including key definitions and relationships that exist in competitive and anticompetitive markets. The literature helps refine our understanding of essential topics related to our research. In particular, we focus on market definition, concentration, barriers to entry, firm conduct, anticompetitive behavior, and performance.

⁷ NAICS is the North American Industry Classification System.

Market Definition and Concentration. The Department of Justice (DoJ) Horizontal Merger Guidelines (Merger Guidelines) provide guidance on a variety of market structure topics related to antitrust enforcement.⁸ Review of the Merger Guidelines helps delineate the concepts of a product market and a geographic market when defining an appropriate market.

A market is defined as a product or group of products and a geographic area in which it is produced or sold such that a hypothetical profit-maximizing firm, not subject to price regulation, that was the only present and future producer or seller of those products in that area likely would impose at least a "small but significant and nontransitory" increase in price, assuming the terms of sale of all other products are held constant.⁹

The Merger Guidelines and related economic literature also define the concept of market concentration. Market concentration involves assessing the relevant market shares of each firm, or at least the dominant firms, in a defined geographic and product market.¹⁰ We measure market concentration using firm market share, expressed by the Herfindahl-Hirschman Index (HHI) or a four- or eight-firm concentration ratio. The HHI measures market concentration by summing the square of each market participant's relevant market share.¹¹ Alternatively, the four- and eight-firm concentration ratios include the summation of market shares of only the top four or eight firms in the defined market, respectively. The HHI offers advantages over the four- and eight-firm concentration ratios, principally by including the effects of firm size on the market structure.

⁸ The Merger Guidelines outline the enforcement policy of the DoJ and the Federal Trade Commission (FTC) concerning horizontal mergers and acquisitions subject to U.S. antitrust statutes. Horizontal mergers represent unions or acquisitions of firms within the same industry segment.

⁹ Merger Guidelines, Section 1.0.

¹⁰ Market shares can be expressed either in dollar or physical terms through measurement of sales, shipments, or production.

¹¹ Section 1.51 of the Merger Guidelines specifies the use of the HHI as a measure of market concentration when evaluating potential anticompetitive and antitrust issues in horizontal mergers. The DoJ convention is to multiply the market share percentage by 100 for each participant, thus the HHI will range from near 0 (perfectly competitive market with an infinite number of participants) to 10000 (a monopolist with 100 percent market share.)

Market Power. A common premise in the assessment of market power is that an increase in market concentration in a relevant market will lead to an increase in market power. Market power represents a firm's ability to raise the price above the marginal cost, without attracting entry. In the extreme case, a single dominant firm without competitors is a monopolist, capable of setting the market price of a particular good without consideration of other firms. The degree to which market concentration dictates market power often depends on the availability of substitute products. The larger the number of substitutes, the less likely a firm will be able to exercise market power. This concept is related to the price elasticity of demand and the cross price elasticity of demand. The price elasticity of demand measures the responsiveness of demand (quantity) with respect to a change in price:

$$\varepsilon = - [\% \Delta Q / \% \Delta P]$$

Where:

ε represents the elasticity,

ΔQ represents the change in product quantity demanded,

ΔP represents the change in product price

The Lerner index, equal to $1/\varepsilon$, represents a measure of market power. Church and Ware (2000) describe the Lerner index as a measure of market power since it is increasing in the price distortion between price and marginal cost. Similarly, the cross-elasticity of demand measures a change in the quantity demanded for one product relative to the change in the price of a second product. The authors note:

The extent to which a firm in imperfectly competitive markets can exercise market power depends on the elasticity of its demand curve. The greater the number of competitors (for homogeneous goods) or the larger the cross-elasticity of demand with products of other producers (for differentiated products), the greater the elasticity of the firm's demand curve and the less its market power.

Over the long term, demand elasticity will increase because of consumer response, new entrants, and the influence of new technology.¹²

Barriers to Entry and Efficiency. The existence of barriers to entry may prevent small firms from entering a market or, on the other hand, may protect them from entry by large firms. Barriers to entry include economies of scale, sunk capital investment, cost advantages, and product differentiation.¹³ An important facet of assessing barriers to entry involves assessing the efficiency of incumbent firms. Antitrust enforcement pertains to the protection of competition from anticompetitive behavior, but should not limit the efficiency of existing firms. A firm's investment in research and development activities to achieve economies of scale or lower cost does not necessarily constitute anticompetitive behavior.

Firm Conduct. The exercise of market power is observed in the conduct and behavior of a dominant firm in the relevant market. Firms engaging in anticompetitive behavior may attempt to raise barriers to enhance or maintain market power. These firms may attempt to lower their costs through product differentiation and capital investments that put new entrants at a cost disadvantage. Alternatively, the dominant firm may elect to raise rivals' costs through anticompetitive behavior, including collusive activity. Church and Ware (2000) outline several examples of facilitating mechanisms for collusive behavior, including exchange of information, trade associations, price leadership, contractual agreements, and resale price maintenance. Predatory pricing and predatory buying are two additional examples of anticompetitive firm behavior. In predatory pricing, dominant firms rely on the ability to manipulate the market price to a point where competitors are unable to remain profitable, as the market price is lower than competitors' marginal cost.

¹² The computation of the price elasticities often proves difficult given data constraints. As a result, the Merger Guidelines focus on changes in market concentration as potential indicators of market power. However, the theoretical nature and importance of price elasticities warrants discussion when defining market power.

¹³ Economies of scale represent a firm's ability to decrease long-run average costs with increases in output; sunk capital investment represents incumbent advantages that require new participants to provide significant up-front capital; cost advantages represent incumbent firms maintaining lower average costs than those expected to be incurred by new entrants; and product differentiation represents the ability of an incumbent firm to preemptively deter new entry by requiring consumers to make additional expenditures to switch products.

Likewise, predatory buying involves a dominant firm bidding up the price of supply in an effort to raise rivals' costs, effectively driving out the competition. Predatory pricing and predatory buying both require the ability of the dominant firm to recoup any losses by charging above the competitive price once competition is eliminated.

Two additional facets of firm conduct involve industry consolidation and vertical integration. Merger and industry consolidation can have significant anticompetitive consequences for small firms. Acquisitions and mergers between large firms or large firms acquiring small firms will often increase market concentration. As market concentration increases, firms may be more likely to exercise market power.¹⁴ With respect to vertical integration, Church and Ware (2000) define a vertical relationship as one in which a product or service is supplied from one production activity to another. We consider a firm to be vertically integrated when that firm manages several different stages in the production or supply chain. When a dominant firm is vertically integrated, there are potential opportunities for the exercise of market power. A company with significant vertical integration, including control of both supply and output, can influence the market price to the detriment of competing firms, including small firms.

Market and Firm Performance. We measure performance by assessing the economic outcome of a particular market structure and firm conduct. One way is to assess the economic profits generated by firms competing in a given market. For example, in a highly competitive market, we expect market prices will converge toward marginal cost, leading to a competitive level of profits for all firms. Alternatively, a highly concentrated market may lead to decreased economic efficiency from the consumer's perspective. The abuse of market power will have social and economic consequences, as dominant firms elect to raise price significantly above marginal cost, thereby reducing output and increasing profitability. Firm conduct also influences market structure and firm performance. In markets with rapid technological change, efficiency gains may be realized, leading to improved firm and market performance. Firm and market

¹⁴ The Merger Guidelines provide a framework for antitrust regulators to evaluate the potential effect of the merger. If the post-merger HHI remains below 1000, no further action is required. If post-merger HHI is between 1000 and 1800, the market is considered moderately concentrated. Finally, if the post-merger HHI is greater than 1800 the market is considered highly concentrated.

performance are typically measured by evaluating firm and industry profit levels, as well as relative efficiency and technological progress.

Small Firm Perspective. The theoretical foundations of structure, conduct, and performance highlight the role of antitrust enforcement, particularly from a small firm perspective. Golodner (2001) believes that the antitrust laws protect two freedoms essential to small business: the freedom to engage in entrepreneurship and the freedom to innovate. Innovation can lead to cost reductions through new technology, allowing small businesses to compete against larger firms. Antitrust enforcement provides potential entrepreneurs with the assurance that small businesses can compete effectively in the market. Small businesses typically have a lower market share and may represent part of a “competitive fringe.” The small firms constituting the competitive fringe typically do not have market power and act as price-takers, supplying product at market prices set by a dominant firm.¹⁵ Any increase in market concentration leading to the potential exercise of market power represents a potential concern for small businesses.

Cameron and Glick (1996) correctly observe that market power is not presumed from market concentration. Other issues, such as the relationship between demand and supply elasticities of dominant firms and the competitive fringe, also provide an indication of the potential for anticompetitive behavior. However, the difficulty of obtaining sufficient data to compute elasticities in a given market leads us to focus on market concentration changes as an indicator of potential abuse of market power. Mergers and acquisitions represent a significant source of a change in market structure and concentration. Indeed, the purpose of the DoJ Horizontal Merger Guidelines is to provide an antitrust enforcement framework in light of changes in market concentration resulting from mergers and acquisitions. Coate and Ulrick (2005) performed a statistical analysis confirming an increasing relationship between market concentration and the outcome of merger investigations by the DoJ and FTC between 1996 and 2003. The assessment of potential impacts on small firms necessitates analysis of whether the changes in market concentration or potential market power abuse negatively affect small

¹⁵ Church and Ware (2000) note that the effect of the competitive fringe is to dampen, but not eliminate, a dominant firm’s control over price.

firms operating in similar markets. A key concern to be addressed in our research is how small firms are affected by antitrust enforcement activity, keeping in mind that the underlying foundation of antitrust legislation is to promote competition and not necessarily to protect small business.

3. Research Design and Literature Review of Specific Case Studies

The previous two sections introduced our central research hypothesis and a general overview of key theoretical concepts related to measuring antitrust impacts on small businesses. In this section, we explain our research design and introduce our case study approach to help assess potential negative small business impacts from increases in market concentration (and potential market power abuse) and to determine whether antitrust enforcement activity helps alleviate potential negative impacts for small firms. We begin by assessing the quantitative and qualitative data to develop small business impact functions in light of potential merger activity and antitrust enforcement. Market share examples include:

$$\Delta X_{m1,t} = f(\Delta M_{m1,t}) \text{ under conditions } A \text{ and } B_1$$

$$\Delta X_{m2,t} = f(\Delta M_{m2,t}) \text{ under condition } A \text{ and } B_2$$

$$\Delta X_{mn,t} = f(\Delta M_{mn,t}) \text{ under condition } A \text{ and } B_n$$

where X represents the entry and exit of small firms in region m at time t as a function of the change in market share (M) under conditions A and B. An example would be condition A (firm Z acquires firm Y) which leads to an increase in market concentration (due to joint market share of Z and Y). In turn, the change in market concentration would lead to a change in the net number of small businesses in the same or similar industries. Finally, we look at conditions B₁ through B_n (depending on number of individual geographic markets), which might represent areas where the FTC/DoJ required divestiture of certain Y establishments, or, alternatively, if no divestiture was required, etc. We can examine the cross-sectional changes among the different regions under the conditions B₁ to B_n to assess our research hypothesis. Alternatively, we can examine

price conditions, where the exercise of market power may be facilitated through changes in price:

$$\Delta X_{m,t} = f(\Delta P_{i,t}) \text{ under conditions } A_1 \dots A_n$$

where X represents the entry and exit of small firms (measured on a net firm count basis) in region m at time t as a function of changes in price (P) of particular input or output i under conditions A₁ through A_n. The constraints (A) may represent antitrust enforcement activity in the same or related industry, where input or output prices are manipulated through the exercise of market power by a dominant buyer or seller.

Regardless of market share changes or pricing levels, the change in the number of small firms depends largely on a host of exogenous factors. Indeed, initial econometric modeling did not provide robust results, raising questions about whether the observed changes in market concentration and price were solely responsible for changes in the net number of small firms operating in the market.¹⁶ However, the heart of the analysis pertains to assessing whether anticompetitive behavior harms small firms. The theoretical discussion in Section 2 indicates that anticompetitive behavior would have negative impacts on all firms. Intuitively, we expect to see a decline in the net number of small firms operating in an anticompetitive environment. In addition, while we might be tempted to think that antitrust enforcement would benefit small firms, it is possible that small firms will receive little or no benefit from antitrust enforcement. Thus we may expect no causal relationship between antitrust enforcement, which serves to protect competition (and not necessarily small business interests) and the number of small firms.

A case study approach allows us to investigate the potential impacts of anticompetitive activity and antitrust enforcement on small firms. Our case study approach involved compiling data and information on changes in market concentration, antitrust enforcement activity, the number of small firms, and the macroeconomy for selected industries and geographic markets. The primary criteria we employed in

¹⁶ We performed extensive panel data regressions examining changes in market concentration and the influence on small businesses in select industries. However, the results indicated potential specification issues which led us to conclude that the inability to control for all exogenous variables hindered the usefulness of the models. Data for several key variables at a disaggregated product and geographic market level were unavailable.

selecting our particular industries involved the presence of antitrust enforcement activity. The validity of the central research hypothesis depends on the presence of antitrust issues, either related to changes in market concentration because of mergers or acquisitions (and the role of the DoJ/FTC) or related to antitrust lawsuits. We selected two distinct industries that provided an opportunity to assess our research concerns.

Retail Grocery Industry. The retail grocery industry offers an excellent opportunity to assess the central research hypothesis. Porter's (1974) seminal work on analyzing the relationship between market structure and industry performance in the consumer goods industry provides a fundamental background for assessing the competitive nature of the retail grocery industry. Porter's research confirmed the importance of consumer choice and product differentiation in assessing market performance in the consumer goods industries. In addition, barriers to entry such as advertising overshadowed the effects of technical entry barriers in determining concentration. The relationship between market concentration and barriers to entry poses significant issues for small businesses operating in the grocery industry, especially where there have been many mergers and acquisitions.

Over the past thirty years, the DoJ and FTC have investigated a number of these mergers and acquisitions for potential antitrust violations. Using the HHI as a measure of concentration, the FTC found most markets were moderately concentrated. HHIs in the range of 1000 to 2000 are not uncommon in many local markets and in some markets they can be as high as 3000.¹⁷ Ellickson (2004) observed that the supermarket industry is an oligopoly, with a few dominant chains and a fringe of small firms. Economic theory suggests that where few competitors exist, the likelihood for collusion or other anticompetitive behavior increases. Balto (2001) analyzed supermarket mergers and concluded:

1. The relevant product market continues to be supermarkets,
2. Geographic markets are typically local,

¹⁷ As discussed in Chapter 2, the DoJ/FTC guidelines consider markets with an HHI in excess of 1800 to be highly concentrated.

3. Competitive effects may arise from either unilateral or coordinated conduct,
4. Concerns about potential competition may lead to enforcement action,
5. Entry barriers may often be substantial, and
6. Efficiency claims require careful scrutiny.

Balto's initial conclusion is one that warrants further investigation as the market has changed dramatically in recent years. Thus it is important to assess the level of competition offered by convenience stores, drugstores, wholesale food clubs, and large big-box retailers, all of which provide consumers with some form of competing choices. Perhaps the most significant change in the competitive landscape has been the entry and growth of mass merchandise retailers (e.g., Wal-Mart) entering the grocery business. Sobel and Dean (NA), Singh, Hansen and Blattberg (2006), and Cotterill (2006) discuss the impact of Wal-Mart entering the market, including how Wal-Mart has been able to change the competitive landscape and garner significant market share in the retail grocery market. Cotterill (2006) and the National Grocers Association (2004) support the notion that geographic markets are typically local, not regional or national. Consumers are likely to visit supermarkets within a small radius around their home or place of work.

Cotterill (1999); Marion (1998); Areeda, Hovenkamp, and Solow (1998); and Paulter (2001) all include the possibility of coordinated conduct among industry participants in areas of high market concentration. In particular, Cotterill suggests that price and concentration in grocery markets are related. Given the oligopolistic nature of the industry and the potential for anticompetitive behavior through increased market concentration, the FTC analyzed and enforced relief in numerous instances.

The presence of significant merger and acquisition activity, including FTC involvement in assessing potential anticompetitive effects, led us to select the retail grocery industry as a case study. We were able to obtain market share information from a third party (*Chain Store Guide*), including data on the number of firms for each

metropolitan statistical area (MSA) and relevant NAICS code between 1999 and 2004.¹⁸ We also isolated particular mergers or acquisitions by large retail grocery chains. As a result, we could compute annual HHIs for each MSA affected by the mergers. In many of these markets, we identified antitrust enforcement activity where the FTC investigated the merger and in some cases required divestiture of stores. We analyzed exogenous variables, including examining demographic and economic variables obtained from the Census Bureau, Advocacy, the Bureau of Labor Statistics, and the Bureau of Economic Analysis. These variables included population, personal income, unemployment, wages and compensation by industry, and additional information on small firm operations. The initial research design of our retail grocery case study involves defining the relevant market and analysis of market structure and behavior issues, consistent with the theory introduced in Section 2, and draws upon the economic literature.

Nature of Demand Conditions and the Competitive Landscape. Demand for most food items is price inelastic, meaning that the quantities demanded by consumers do not change significantly with changes in price. This is because food items, in general, are basic necessities (e.g., milk) that are required by all consumers regardless of price levels. The demand for certain kinds of higher-priced or specialty food items, however, is typically more price elastic.¹⁹ When demand is relatively price inelastic, retailers may be tempted to raise prices, knowing that consumers will have little choice but to spend more for these basic goods. What tempers the ability of retailers to impose such price increases is the competitive nature of the marketplace, and the fact that competing retailers may not follow such price increases. Thus market structure and the existence of competitive constraints become important factors in evaluating the competitive nature of the grocery industry.

Supermarkets and increasingly mass merchandisers dominate the retail food industry. The FTC considers a grocery store a supermarket if it offers one-stop shopping for food and other grocery items and offers a full line of at least 10,000 stock-keeping

¹⁸ In 1998, the NAICS replaced the Standard Industrial Classification (SIC) system for describing different business operating environments. Numerous MSAs were also reclassified in 2002 based on changing population dynamics and geographic boundaries.

¹⁹ For example, when expenditures must be limited because of higher prices, consumers are more likely to eliminate from their shopping lists a rare, higher-priced cheese and substitute a basic deli cheese.

units (“SKUs”).²⁰ *Mass Market Retailers*²¹ (2004) notes that approximately 73 percent of shoppers use a supermarket as their main source of food. While this percentage is high, it has actually decreased in recent years. Indeed, 20 percent of respondents to the *Mass Market Retailers 2004* survey reported that they no longer shopped at a supermarket at all. The main reason is that supermarkets are facing increasing competition from “supercenters,” or mass merchandisers such as Wal-Mart and Costco, that have dramatically expanded their grocery departments. In fact, of the top 100 regional grocery markets, no less than 59 include at least one mass merchandiser among the top five food retailers. These mass merchandisers are increasing the variety of items offered for sale to provide a competitive alternative to supermarkets. Consumers now view these firms as providing an alternative to the large supermarkets, and therefore we believe they should be part of the relevant market.

The retail grocery industry also includes smaller, “mom and pop” grocery stores that offer less variety than the larger chains. These smaller firms may offer their customers a smaller variety of items at higher prices than supermarkets,²² but may offer items of perceived higher quality and provide better customer service. They are typically located in niche neighborhood markets where they are able to target consumers with certain demographic profiles, such as by offering ethnic foods, enhanced services (e.g., delivery, high end fruits, vegetables, meats, or fish, etc.). Increasing market penetration by supermarkets and mass merchandisers has led to a decline in the number of small firms. In certain markets, especially geographically isolated markets, small retailers provide a competitive constraint on the larger retail grocery outlets. However, we observe a trend in large metropolitan markets, where small grocers have exited the market.

Definition of the Relevant Market. In Section 2, we introduced the concept of market definition, including defining the relevant geographic and product markets. With respect to the retail grocery industry, the FTC has adopted a relatively narrow definition of the relevant product market in evaluating grocery mergers, limiting the market to

²⁰ For example, see FTC Complaint in the matter of The Kroger Co. and Fred Meyer Inc. (2000).

²¹ *Mass Market Retailers* is a bi-weekly industry trade publication that covers the mass retail industry.

²² This is because smaller firms cannot usually achieve the economies of scale that allow larger supermarkets to charge lower prices.

supermarkets and excluding small retailers and mass merchandisers. However, the growth of mass merchandisers selling groceries places a pricing constraint on supermarkets; in addition, these mass merchandisers now offer a large variety of products, and consumers view them as providing a realistic alternative to supermarkets. Furthermore, small firms, acting as a competitive fringe, also may place a pricing constraint on supermarkets. The product market as defined in Section 2 hinges on the availability of substitutes. Consumers view small grocers and mass merchandisers as alternatives; these providers thus warrant inclusion in our analysis. For our analysis, we define the relevant product market as all retail grocery sales, including supermarket sales, mass merchandiser grocery sales, and small grocery sales.

Defining the relevant geographic market involves determining how far consumers will drive or walk for their groceries. This radius is typically 3 to 15 miles, but may vary by area. For example, in areas where most people drive to a supermarket, the most appropriate geographic market may be a metropolitan statistical area (MSA). In smaller urban areas where consumers walk to stores, the geographic radius is usually smaller, perhaps a few blocks. For purposes of our analysis, the best market share data available were at the MSA level. As a result, one may view our markets as being too broadly defined, but if anything that would lead to the conclusion of more, not less competition.

Market Structure. The grocery industry is an oligopoly with moderate to high levels of concentration in most markets. Cotterill (2006) notes that in general, three competitive firms are required to reduce the likelihood of anticompetitive behavior in a specific market. In our investigation of relevant geographic markets we found that most markets have between two and four major competitors, each possessing a 10 percent share or more. The industry also has certain entry barriers in the form of scale economies. The grocery industry is a relatively high-volume, low-margin industry, and depends on the realization of scale economies to be profitable. Even nonchain smaller grocers have to maintain a certain level of sales volume, that is, reach a certain scale, to remain competitive. Similarly, grocers must maintain significant product variety to attract customers to do one-stop grocery shopping. The realization of scale economies is also achieved through efficient inventory management techniques. Inventory turnover is

critical to maintaining margins, and smaller grocers are finding it increasingly difficult to compete with the sophisticated automated supply management systems used by the large supermarket chains and mass merchandisers. Large firms that possess technological advantages and economies of scale add to absolute cost advantages vis-à-vis small firms.²³

Market Behavior. Firms in this industry practice price leadership, which is when one company sets its price, competing retail grocery chains will immediately follow. Large firms have an incentive to collude to force smaller rivals out by adjusting prices in concert. Another facilitating mechanism in the retail grocery industry is the potential coordination of inventory and supply among major chains. Anticompetitive behavior in the retail grocery industry typically presents itself in several forms, each of which is designed to enhance the market power of the leading firms and to allow them to raise and control prices. One anticompetitive practice is to reduce competition by limiting the available grocery options in a given market area. This includes land banking, where a large grocery chain acquires or maintains a land site suitable for a grocery store, but refuses to lease the site to one of its competitors, thereby reducing the threat of competition. Another example is the sale of a supermarket site to a drugstore chain, which eliminates the potential store from the market by selling it to someone who would set up a drugstore. Varney (1995) notes that supermarkets have been accused of taking such actions before merging with or acquiring another chain so as to limit the store divestitures the FTC might require in approving the transaction.

Finally, larger firms may target smaller firms to raise their costs. According to Cotterill (2002), Stop & Shop's proposed acquisition of Big V Supermarkets was significant because Big V was the largest member of Wakefern Food Corporation, a wholesale food cooperative that supplied 41 members in New Jersey, New York, Pennsylvania, Delaware, and Connecticut. In acquiring Big V, Stop & Shop would have eliminated Wakefern's largest customer, which would have raised the wholesale prices charged to each of the other cooperative members. In fact, Wakefern estimated that Big

²³ Balto (2001) highlights the advantages of efficiency, notably economies of scale in the retail grocery industry. Singh, Hansen and Blattberg (2006) state that Wal-Mart's proprietary Retail Link software provides a tremendous advantage in logistics and inventory control.

V's acquisition would cause each of its members to bear increased annual costs of \$230,000 per store. Such increased costs might have been enough to push Wakefern members out of the market, further benefiting Stop & Shop.

Timber Industry. Economic literature highlights other potential antitrust issues for small businesses, including the exercise of market power through predatory pricing or predatory buying. Small businesses operating in certain industries rely on securing adequate supplies of raw inputs to remain competitive with larger firms. One example is the U.S. timber industry, which comprises numerous small firms including sawmills.

The timber industry involves large and small firms engaged in the production of timber for commercial purposes. The production process includes the selling of timber from property (landowners), cutting timber (loggers), transporting timber (transportation), manufacturing of wood products (sawmills), and assembly (specific manufacturers, not sawmills). The initial step in the harvesting of timber is securing supply from a landowner. Landowners are typically separated into three distinct categories, including nonindustrial private landowners, industrial landowners, and government landowners. Regional differences exist in the ownership structure of timber inventories. For example, in the eastern United States, the majority of forest land is privately owned, but in the West, the vast majority is controlled by industrial companies and governmental agencies. Standing timber is typically removed by a logger, who often will perform a variety of duties. These include cruising, felling, skidding, and grading and sorting.

The cruising process involves isolating timber tracts with desirable mature timber suitable for harvest and production. Felling involves the act of cutting the timber, while skidding is the process of moving the felled timber to transportation locations. Because timber is available in a wide variety of species, it must be graded and sorted (to the extent this was not done in the cruising process). Different grades exist within a particular species, often determined by age or size. Loggers or timber transportation companies will transport timber to facilities for additional sorting and grading, after which the timber is processed for wood products manufacturing or potentially for export. Sawmills are

typically actively involved in sawing dimension lumber and are often configured to handle a particular type of timber.

A wide variety of timber species exists in the United States. In the eastern United States, the predominant type of timber is hardwood, composed of oaks, gums, walnuts, and hickories. In the western United States, the principal species are softwoods like Douglas firs, hemlocks, true firs, spruces, cedars, and redwoods. The particular species will dictate the consumer end use products manufactured from the timber. For example, hardwoods are typically used for furniture, flooring, veneer, and pallets, while softwoods are predominantly used in manufacturing construction lumber and plywood. Differences in quality and composition prohibit the substitution of various species.²⁴ Within species, the quality also varies. Pulpwood refers to timber grown specifically for use in the manufacture of paper and related products; typically, inferior trees are harvested for such production.

The timber industry provides products primarily to the housing, furniture, and fixtures industries, as well as other industrial sectors that rely on pallets or additional wood products. Howard (2007) reported that new housing construction accounts for more than one-third of the U.S. softwood lumber and structural panels consumed and substantial volumes of other softwood and hardwood products. With respect to industrial roundwood²⁵ use, saw logs used in the domestic manufacture of lumber represent more than half of production. Figure 3-1 shows the trends in U.S. industrial lumber production and consumption.

Another feature of the timber industry is the relative volatility of timber prices. Figure 3-2 shows the average stumpage price²⁶ for sawtimber sold from national forests for Douglas fir (in the Pacific Northwest) and all hardwoods (in the eastern United States). The data indicate a wide variety in year-to-year price movement. The price of timber, the most critical input for sawmills, is a key consideration for small firms in the timber industry and important in assessing their sustainability.

²⁴ For example, high-end cabinets are almost exclusively manufactured with hardwood species, where the use of softwood timber would reduce the quality and durability of these products.

²⁵ Roundwood timber refers to circular logs harvested and processed by a variety of consumers, including sawmills.

²⁶ Stumpage price refers to prices paid at the location of the timber, without consideration of transportation.

Figure 3-1 Timber Industry Production Data

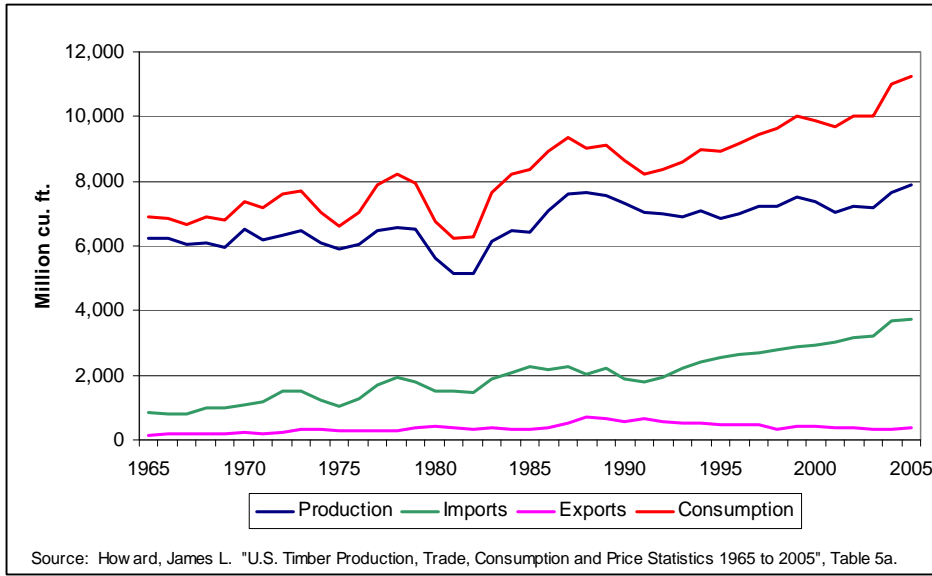
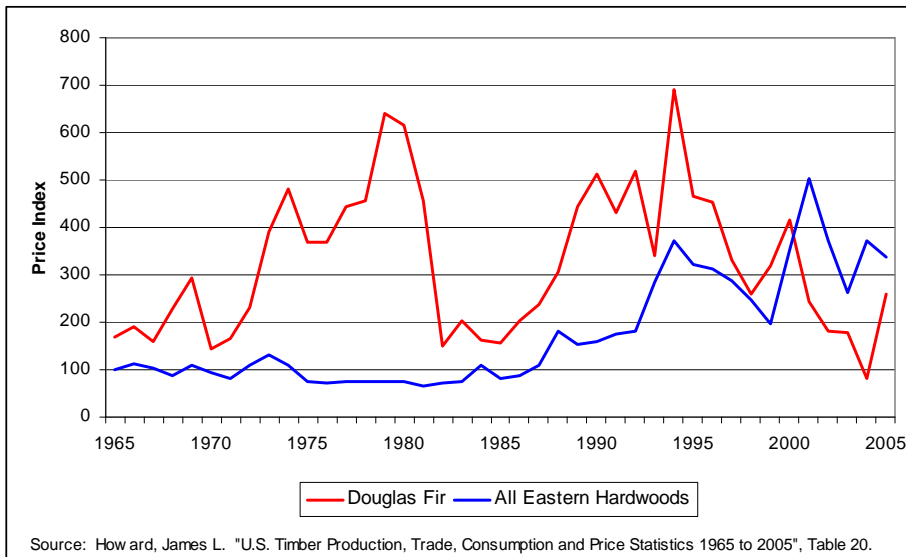


Figure 3-2 Average Stumpage Price Index for Sawtimber Sold from National Forests



In many industry segments like sawmills, small businesses depend on acquiring one particular species to run through the mill. The lack of substitutes limits the scope of the product market; characteristics of the species (e.g., degradation) will often limit the geographic scope of the market. Because there are many small firms in this industry,

dominant firm conduct may have significant ramifications for small businesses. One example is the exercise of market power by dominant buyers (oligopsony) of raw timber supplied by small businesses.

The economic literature supports the conclusion that the timber industry is an oligopsony. Asinas (2001) found that firms in certain timber industry sectors were exerting oligopsony power through their purchasing activities. The research has implications for small businesses that must compete from a buying perspective. In the long run, a monopsony or oligopsony will lead to lower prices in the input market. However, in the short run, dominant firms may exercise market power and raise the price of raw materials to effectively force out competitors by raising rivals' costs. Small firms will have to spend more to secure input and often are unable to pass along these higher costs to consumers of finished products.²⁷

Murray (1995a and 1995b) also observes the exercise of oligopsony power in the timber industry. He examines the impact of market power on the sellers of raw inputs, rather than on the dominant firm's direct competitors. If the dominant firm can depress the market price of inputs to enhance profitability, sellers of these inputs will divert resources away from this market. However, the increased profitability may attract new entrants to the market, including small firms. Bowe, Smith, and Araman (2001) note that hardwood sawmills are typically small, family-operated businesses, in contrast to softwood sawmills, which are large, higher-volume mills. From a small business perspective, the structure of the hardwood segment of the timber industry is more germane to assessing the potential implications of a dominant buyer.

The initial research design of our timber case study involves defining the relevant market and identifying its other structural and behavioral features, consistent with the theory introduced in Section 2. The research draws upon the literature where relevant.

Market Definition, Structure and Behavior. We examine relevant markets—both product and geographic—in the timber industry. Timber resources are largely divided between hardwoods in the eastern United States and softwoods in the West. The numerous timber species in both regions suggest a broad product market definition. However, the

²⁷ It is important to note that technological innovation and efficiency may create natural oligopsonies.

significant constraints on the substitutability of different types of timber narrow the relevant product market.

In the Pacific Northwest, the predominant timber species is Douglas fir, a softwood primarily harvested for lumber and plywood. While a sawmill dedicated to processing Douglas fir may have several options for procuring raw timber, most hardwood sawmills, as the Internal Revenue Service (1998) notes, are small operations that draw resources from a relatively small area. Red alder, a hardwood variety found principally in western Washington and Oregon, is useful for making crafted wood products, including furniture and guitars. Red alder is almost always harvested as a byproduct of the region's more dominant softwoods. Sawmills dedicated to processing red alder may face greater supply issues than sawmills processing softwoods such as Douglas fir. The specialization of red alder sawmills will often preclude the mill from handling, or substituting, other species. For example, a red alder sawmill is unlikely to process Douglas fir or other timber species when faced with supply shortages. The configuration of the sawmill defines the relevant product market and in the Pacific Northwest, the relevant product market for red alder sawmills is limited to red alder trees.

Product characteristics as well as transportation costs define the relevant geographic market. For example, red alder sawmills are usually located within 100 miles of supply sources, given the tendency for red alder logs to deteriorate and lose value once harvested. Moreover, not all species are indigenous to every region. While Douglas firs are found in numerous locations throughout the western United States, the supply of red alder trees is almost exclusively limited to the Pacific Northwest, primarily western Washington and Oregon. The timber industry has contracted significantly in recent years; the number of forest and logging establishments declined by 3.5 percent in the United States between 1998 and 2005. Indeed, the number of establishments contracted throughout the timespan, which includes periods of economic expansion (1998-2001) and recession (2001-2002). The available data are insufficient to adequately assess whether macroeconomic factors alone explain the decreasing number of establishments.

In the timber industry, particularly with sawmills, we are often dealing with homogeneous goods. A sawmill dedicated to red alder will not be able to find alternative timber products to process in its existing facilities. In general, when alternative supply

sources are available, market power may be difficult to exercise even for a firm with a significant share. Where supply sources are limited, however, it may be possible for a large or dominant firm to exercise market power from a buyer's standpoint. In this situation, the dominant firm would be considered a monopsonist.²⁸ By exercising market power, the monopsonist may dictate market price by controlling supply. Several structural characteristics of the market serve to protect the market power of the dominant firm, including economies of scale, sunk costs, cost advantages, and supply constraints. These structural characteristics act as barriers to entry and are particularly relevant for small independent timber companies, including sawmills.

From a purchasing standpoint, small businesses are affected by the dominant firm's conduct that leads to the control of upstream (timber) supply. For example, a dominant sawmill may employ a strategy of controlling the supply of raw material inputs in an effort to increase the costs of resource procurement by competitors. As the available supply is restricted, competing firms may have to purchase raw materials at a higher cost, leading to reduced profitability. If the supply constraint is sufficient to push marginal costs above the price of the final good, the firm will experience short-term losses. Unless the competing firms address the anticompetitive behavior, the short-term losses will quickly lead to the exit of the business and simultaneously deter new entry.

As discussed in Section 2, a dominant buyer may employ several different strategies designed to raise rivals' costs. First, price leadership (from a buying perspective) may cause rivals' costs to increase. If the dominant firm begins to bid up the price of raw materials, competing firms will have to match the bid prices in order to acquire supply. The dominant firm conduct is akin to predatory pricing, except in this situation it is "predatory bidding." Second, long-term supply contracts may also be used to raise rivals' costs and to lock up the supply of raw materials. If a sufficient portion of supply is controlled, input costs may increase for the dominant firm's rivals. Both factors exist in the timber industry and raise issues regarding anticompetitive impacts on small firms in this market.

²⁸ A monopsonist is analogous to a monopolist, except a monopsonist is the sole buyer of an input whereas a monopolist is the sole seller.

The degree of vertical integration can also influence small firms' ability to compete at different levels of the market. In the timber industry, a vertically integrated firm may own timber resources (forest land), perform the logging function, and also own sawmills. In this situation, the firm may experience cost advantages by integrating the production process. Alternatively, if the firm happens to have a dominant position in both upstream and downstream markets, it can raise downstream rivals' costs by exercising market power in the upstream sector.

The literature dovetails nicely with a case study analysis of several recent antitrust lawsuits. Several small, independently owned sawmills in Washington and Oregon alleged that a global forest products company, Weyerhaeuser, Inc., monopolized the red alder timber market in the Pacific Northwest, employing anticompetitive strategies designed to raise rivals' costs through monopsonistic behavior.²⁹ We view the antitrust litigation from two different perspectives. First, does the antitrust litigation itself create a barrier to entry for competing firms, particularly small businesses interested in the potential outcome of the litigation? Second, do small firms in related industry sectors react to antitrust events in the affected market?

We reviewed litigation documents pertaining to the antitrust lawsuits in the Pacific Northwest timber industry. In particular, we focused on the lawsuits involving alleged predatory practices by the dominant, vertically integrated buyer of a specific raw input, red alder. The plaintiffs in the suits were small independently owned sawmills operating in the same competitive markets. We compiled annual data on the number of sawmills using the Census Bureau's County Business Patterns and Statistics of U.S. Businesses. We also examined data on potentially related industry segments (e.g., other mills and production facilities) that depend on securing raw inputs to gauge the reaction of these small firms to the antitrust litigation in a closely related segment. In addition, we examined price data compiled by the Washington Department of Natural Resources and the Oregon Department of Forestry. Finally, we also included exogenous factors similar to those described in the retail grocery industry. These included industry wage and compensation data, population, personal income, and unemployment.

²⁹ Monopsony represents the ability of one company to engage in predatory buying practices. Blair and Harrison (1993) provide an excellent review of monopsony in the context of antitrust law and economics.

4. Case Study Results

Each case study provides a different perspective on potential anticompetitive impacts for small business. The retail grocery case study focuses on changes in market concentration and antitrust enforcement to assess small business reaction. The timber industry case study focuses on small business reaction to alleged predatory buying behavior and the resulting antitrust litigation. In each case study, we recognize the presence of a vector of exogenous factors (e.g., local/national economy) that we are unable to control or account for. Data limitations preclude representing some of these exogenous factors on the disaggregated local level. However, we believe the results provide a reasonable indication of some of the impacts of antitrust enforcement on small businesses. We begin with a discussion of the retail grocery industry.

Retail Grocery Industry Case Study Results. The retail grocery industry provides useful insight into the effects of mergers and acquisitions and the effects of antitrust enforcement on small firms. Over the last several years, the industry has undergone a significant period of consolidation in which the largest chains have merged and also acquired a number of smaller local chains and grocers. In many of these cases, the Federal Trade Commission (FTC)³⁰ exercised its antitrust enforcement powers in evaluating these mergers and imposed relief to protect competition.³¹ In a number of instances, government action resulted in the divestiture of assets (stores) to reduce the post-merger concentration with the intent of reducing the likelihood of anticompetitive behavior.

This case study evaluates how these mergers affected the growth and sustainability of small grocers who compete with large chains in local markets. We focused on whether antitrust enforcement activity created opportunities or provided

³⁰ The FTC, not the Justice Department, has been given oversight authority for investigating mergers in this industry.

³¹ Between 1996 and 2003, the FTC investigated 14 proposed mergers in the grocery industry that affected 152 grocery business markets, including 129 that were “enforced” and 23 that were “closed.” Enforced markets are those in which relief was sought, while closed markets are those in which the FTC did not seek relief.

procompetitive benefits for small firms or, alternatively, whether the acquisitions by larger retailers led to the exit of small firms.

In the following section, we summarize the results of three independent case studies that analyze MSA-level data to determine how small grocers fared with respect to specific grocery mergers as well as differing levels of enforcement activity by the FTC. In selecting the three case studies, our objective is to test the impact of antitrust enforcement activity at three levels: with extensive, limited, and no FTC enforcement activity. Our market concentration data were available only for 1999 to 2004 and we restricted our search criteria to mergers and acquisitions that began between 1998 and 2000 so as to allow for possible lags in the response times of small businesses to the merger activity. We identified the following three mergers (or groups of mergers) for analysis: the Albertsons merger with American Stores in 1999; Winn-Dixie's acquisition of Jitney-Jungle Stores in 2000; and selected local mergers involving Kroger, SuperValu, and Giant Eagle in which small retailers were acquired spanning the period 2000-2001.

Albertsons Merger with American Stores. In 1999 Albertsons,³² a large Boise, Idaho-based supermarket retailer, sought to acquire American Stores,³³ a supermarket chain based in Salt Lake City. The FTC immediately instituted an investigation of the proposed merger, citing potential anticompetitive impacts, particularly in California, New Mexico, and Nevada. The attorney general of California also launched an investigation, and ultimately followed the lead of the FTC regarding a consent agreement that required divestiture of 145 stores and four planned store sites in California, New Mexico, and Nevada. In the FTC Albertsons – American Stores Company Complaint (1999), the FTC indicated that post-merger market concentration would be very high, with HHIs in the range of 2000 to 8000. Further, the FTC found that entry was difficult and, without some form of relief in these highly concentrated post-merger markets, there would be little to

³² Albertsons operated 994 supermarkets in 25 midwestern, western and southern states including 177 in California, 31 in Nevada, and 19 in New Mexico. In 1999, Albertsons had sales of \$16 billion and was the fourth largest supermarket retailer in the United States. American Stores owned 807 supermarkets located throughout the West and was heavily concentrated in California, with 411 supermarkets in that state alone.

³³ American Stores marketed under the Lucky, Lucky-Savon, SuperSaver, Acme, and Jewel Foods brands. American Stores had sales of \$19.9 billion in 1999, making it the second largest supermarket retailer in the United States, behind Kroger.

prevent anticompetitive behavior in the form of higher prices, more limited choice, collusion, and poorer quality and service.

A consent agreement between the FTC and Albertsons and American Stores (1999) was reached in July 1999, allowing the merger to proceed, but with the requirement that the 145 stores and four sites be divested and sold to certain preapproved (by the FTC) buyers. Table 4-1 summarizes the buyers and number of stores acquired by each. With the exception of Certified Grocers, the other buyers were all large competing supermarket chains. Indeed Ralph’s (owned by Kroger) was the largest chain, and obtained the second largest number of stores, enabling it to enter a number of markets in California where it did not previously have a presence. Adamson (1999) reported that Certified Grocers acted as a broker and sold off stores to a number of small retailers including Gelson’s, Jons, Top Value, and Vallarta.

Table 4-1 Divestiture of American and Albertsons Stores and Sites

	California	Nevada	New Mexico	TOTAL
Certified Grocers	31	0	0	31
Raley's	0	20	8	28
Ralph's (Kroger)	40	0	2	42
Stater Brothers	44	0	0	44
Von's	4	0	0	4
Total	119	20	10	149

Source: FTC Consent Order.

Analysis of the Merger and the FTC’s Enforcement Activity. After a thorough analysis of competitive impacts, the FTC found that without relief the merger was likely to restrain trade and lead to a likelihood of anticompetitive behavior. Our analysis of the FTC’s actions suggests that it correctly identified potential anticompetitive concerns, but the relief that it imposed did not necessarily have the desired effect. In addition, although approximately 20 percent of the divested stores were potentially to be sold to small businesses, these small firms did not gain a competitive advantage from this opportunity, and ultimately small businesses may have suffered from this merger despite the relief, as well as from other long-term market events.

We analyzed the pre- and post-merger market conditions in 15 MSAs in which the FTC enforced this divestiture and in one MSA in which no divestiture was required.

These MSA markets were in California (12), Nevada (1), and New Mexico (3). We measured market shares and concentration in both the pre-merger time period and after the merger through 2004. We also assessed the entry and exit of small firms,³⁴ small firms' market share relative to large firms', and the impact of the entry and growth of large mass merchandisers since the merger. Table 4-2 compares the pre- and post-merger HHIs for the 16 markets we examined and also shows the post-merger HHIs for four years following the merger. As may be seen, most pre-merger markets were moderately concentrated, hence the reason for the FTC's concern about the merger. HHIs ranged from 1000 to 1800 and four-firm concentration ratios ranged from 61 percent to 82 percent. The last market shown in the table, Chico-Paradise, is the one area in which no divestitures were required. This market had a somewhat lower level of concentration (HHI = 1215), but concentration did increase post-merger.

Table 4-2 HHI in Relevant Markets

Market Area - MSA	1999	2000	Diff	2001	2002	2003	2004
Albuquerque, NM	1074	1549	475	1586	1867	1636	1715
Bakersfield, CA	1208	1144	(64)	1304	1259	1201	1260
Las Cruces, NM	1539	1877	339	1596	3504	3010	3242
Las Vegas, NV-AZ	1773	1908	135	1681	2284	1994	1940
Los Angeles-Long Beach-Santa Ana, CA	1356	1532	176	1554	1500	1406	1308
Riverside-San Bernadino, CA	1501	1721	220	1792	1941	1862	1784
Sacramento, CA	1603	1678	76	1694	1578	1772	1607
Salinas, CA	1353	1546	194	1628	1472	1466	1324
San Diego, CA	1657	1886	229	1929	1712	1614	1567
Santa Barbara, CA	1871	1943	72	2023	1824	1802	1598
Santa Cruz-Watsonville, CA	1492	1646	154	1714	1459	1469	1419
Santa Fe, NM	1608	1585	(23)	1653	1743	1639	1640
Santa Rosa, CA	1730	2138	409	2119	2122	1847	1443
Vallejo-Fairfield-Napa, CA	1121	1279	158	1584	1623	1573	1434
Ventura, CA	1666	1940	274	2101	2148	1977	1949
Chico-Paradise, CA	1215	1385	170	1309	1537	1561	1342

We examined the change in HHI between 1999 (pre-merger) and 2000 and beyond (post-merger) as an indication of whether the FTC enforcement action had the desired effect of maintaining, or at least not substantially increasing, market concentration.³⁵ The data indicate an increase in HHI over 100 points in 12 of 16

³⁴ Consistent with SBA definitions, we defined small firms as having sales of less than \$25 million.

³⁵ The reasons for the change in HHIs and concentration are obscured to some extent by the fact that another merger occurred at about the same time between Kroger and Fred Meyer, which had the effect of increasing Kroger's market share to some extent in certain markets.

markets, each classified as moderately concentrated (HHI > 1000). In six of the markets analyzed, the post-merger HHIs were over 1800, indicative of a highly concentrated market. In only two markets did the HHI decline, and in two others the increase was less than 100 points.³⁶ This suggests that, despite attempts to require divestiture in order to prevent increases in market concentration, most of the markets experienced a significant increase in concentration after the merger was consummated. Looking at trends in concentration several years after the merger, the implications become less clear in certain markets due to other trends and factors influencing the market structure.

Another key factor we examined was the impact of the merger and the antitrust enforcement action on small firms. Important research questions included whether small firms were harmed or possibly benefited because of the merger and whether the relief imposed by the FTC provided market expansion opportunities for small businesses. First, we measured the market share held collectively by small firms³⁷ in each of the geographic markets we examined and the change in small firm market share over time (pre- and post-merger). These data show relatively wide variation in the share held by small firms among the various markets (Table 4-3). Bakersfield, Santa Cruz, and Vallejo had relatively significant (greater than 10 percent) shares. It appears that in these markets, which are somewhat smaller and more localized, fewer large supermarket chains were competing, which allowed smaller firms to capture a larger niche.³⁸ In the other markets, small firms held a relatively small share of the total market, generally in the range of 5-7 percent.

³⁶ The average increase in the HHI across all markets was 187 points.

³⁷ As noted above we defined small firms as those having sales of less than \$25 million.

³⁸ These markets tended to be less concentrated, with the exception of Santa Cruz where Safeway held a predominant position.

Table 4-3 Market Share Held by Small Firms in Relevant Geographic Markets

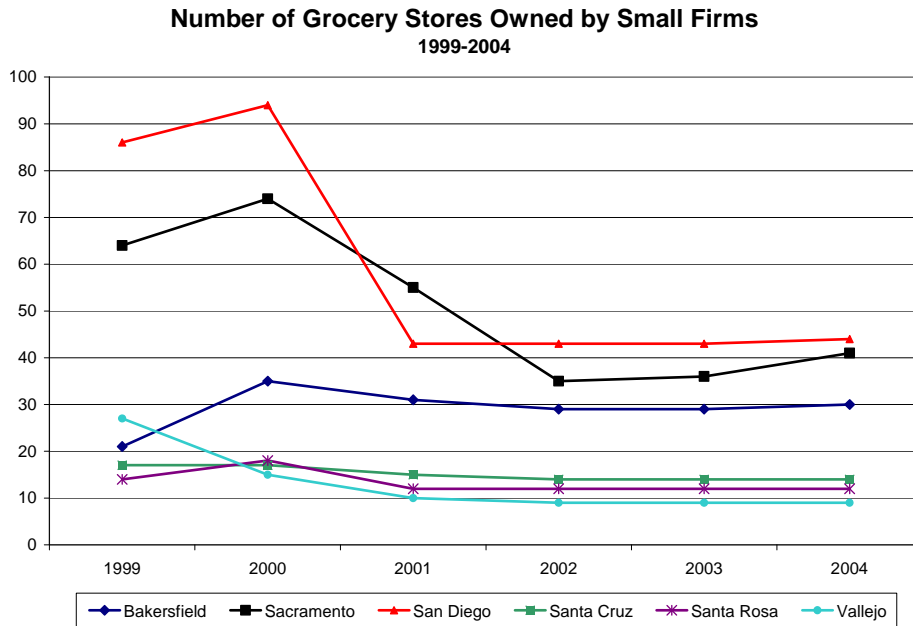
Geographic Market	1999	2000	Diff	2001	2002	2003	2004	Diff 04-99
Albuquerque, NM	4.6%	4.5%	0.0%	3.2%	4.0%	3.3%	3.1%	-1.5%
Bakersfield, CA	14.6%	20.4%	5.8%	10.8%	12.8%	12.7%	10.7%	-3.9%
Las Cruces, NM	8.5%	7.8%	-0.7%	6.8%	27.3%	24.0%	16.8%	8.3%
Las Vegas, NV-AZ	2.3%	3.8%	1.5%	3.0%	1.1%	0.9%	0.9%	-1.4%
Los Angeles-Long Beach-Santa Ana, CA	9.3%	10.7%	1.4%	8.3%	4.8%	4.8%	5.3%	-4.0%
Riverside-San Bernadino, CA	6.6%	7.1%	0.6%	5.5%	2.0%	2.1%	2.0%	-4.6%
Sacramento, CA	9.4%	10.4%	1.0%	8.4%	6.4%	5.6%	5.4%	-4.0%
Salinas, CA	8.7%	8.6%	-0.1%	4.4%	8.3%	7.8%	8.1%	-0.6%
San Diego, CA	6.6%	6.9%	0.3%	2.4%	5.5%	5.1%	5.2%	-1.4%
Santa Barbara, CA	6.6%	6.4%	-0.2%	2.8%	9.5%	9.4%	8.3%	1.7%
Santa Cruz-Watsonville, CA	17.4%	17.1%	-0.3%	12.8%	21.1%	18.2%	19.6%	2.2%
Santa Fe, NM	7.4%	7.2%	-0.2%	5.3%	9.7%	7.5%	7.8%	0.4%
Santa Rosa, CA	4.5%	5.9%	1.4%	5.4%	11.2%	10.3%	9.0%	4.5%
Vallejo-Fairfield-Napa, CA	10.0%	6.7%	-3.3%	4.6%	7.7%	7.4%	7.0%	-3.0%
Ventura, CA	4.4%	4.0%	-0.4%	1.3%	1.8%	1.7%	1.8%	-2.6%
Chico-Paradise, CA	8.9%	6.5%	-2.4%	5.0%	5.9%	5.5%	5.2%	-3.7%

In the immediate post-merger period, small firms experienced an increase or no change in market share in eight of the sixteen markets. However, most gains appeared to be transitory in nature. Thus while it might appear that small firms realized some small gain in market position, it appears that such gains were short-lived. Table 4.3 also indicates that in the period 2002-2004, the small firm market share declined substantially in most markets; the only exceptions were Las Cruces, New Mexico; Santa Rosa, California; and, to a lesser extent, Santa Cruz, California. Small firms appear to have lost market share to both the large chains, but more significantly to the mass merchandisers who experienced the largest increase in market share during this period.

In addition, we also examined the entry and exit of small firms in each of these markets.³⁹ In 2000, the number of small firms increased because of the divestitures ordered by the FTC to Certified Grocers, which in turn sold to several small firms. For example, in Bakersfield, as well as in Las Vegas, Riverside, Sacramento, and San Diego, small grocer entry increased. The average increase was eight new stores (not necessarily owned by eight different companies). Again, however, these increases were of a transitory nature, and by 2001, we see many small firms exiting from each of these markets. Figure 4-1 highlights this trend for markets where the MSA definition remained the same and thus for which data 1999-2004 data are comparable.

³⁹ The data make this analysis somewhat more difficult, as the definitions of certain MSAs changed between 2001 and 2002; those data are noncomparable between those periods.

Figure 4-1



Another important factor involves the economic conditions existing in the particular markets. We cannot categorically conclude that the changes in market share, irrespective of changes in economic conditions, led to the change in the market share of small firms. Market share changes and local unemployment rates exhibited a wide divergence. Examination of the lagged small firm market share and the unemployment rates provided a mix of positive and negative correlation, insufficient to conclude that potentially deteriorating macroeconomic conditions (such as a rise in unemployment) led to a marked decrease in market share. However, several exogenous variables specific to the individual retail grocery industry may also play an important role in dictating the change in market share.

Thus it appears that small firms did not fare well in the wake of the Albertsons/American Stores merger despite the attempts by the FTC to bring relief and limit the increase in market concentration resulting from the merger. In an attempt to gain a better understanding of why this was so, we examined the impact of the divestitures in some detail in specific markets where one might have expected that small firms would have benefited. We found several interesting trends:

- In several markets, Kroger acquired a significant number of Albertsons/American Stores and was able to gain a major position in a geographic market that it did not have prior to the merger.
- The divestiture of stores to smaller firms via Certified Grocers did not provide a long-term benefit to those firms, many of which ultimately exited the market in the 2002 time frame. It is likely these firms exited because of factors other than the merger itself, including their own inefficiency, the growth of the mass merchandisers, and greater competition from the large supermarkets on a broad scale. External exogenous economic factors also contributed to the dynamics of market entry and exit.

This study indicates that small firms did not benefit over the long term from the FTC's required divestiture of stores by Albertsons and American Stores. Indeed the merger caused an increase in market concentration which undoubtedly had some harmful effects on small firms and was one cause, but certainly not the only one, of small firms exiting the market in subsequent years. We noted that Kroger was a beneficiary of the merger as a result of the divestiture. The other major beneficiary was indeed Albertsons. Whereas in 1999, Albertsons held a top four position in only nine of the sixteen markets we analyzed, by 2003, it was in the top four in all sixteen. Small and mid-sized firms (e.g., Furr's, Raley's) exited key markets, leading to an increase in concentration.

Winn-Dixie's Acquisition of Jitney-Jungle Stores. In late 1999, Jitney-Jungle Stores,⁴⁰ a Jackson, Mississippi-based regional retailer and grocery chain, declared bankruptcy because of financial distress caused by a heavy debt load and increased competition. In fall 2000, Winn-Dixie,⁴¹ a large regional supermarket chain in the Southeast, sought to acquire seventy-two of the Jitney-Jungle supermarkets. The bankruptcy court approved the sale, but the FTC intervened, initiating an investigation into potential anticompetitive effects of the proposed acquisition. Prior to issuing a complaint, the FTC reached an agreement with Winn-Dixie that it would not acquire four of the seventy-two stores,

⁴⁰ Jitney-Jungle operated 133 retail grocery stores. Major markets were in Louisiana, Mississippi, Alabama, and the Florida panhandle.

⁴¹ Winn-Dixie operated about 1,000 supermarkets in 14 southeastern states with annual sales of \$14 billion.

including two stores in the Ft. Walton-Destin, Florida, area, one in the Pensacola, Florida, area, and one in Biloxi, Mississippi. Furthermore, Winn-Dixie agreed for a period of ten years not to acquire any other supermarket assets in selected markets including various areas in the Florida Panhandle, various counties in Mississippi, Mobile County, Alabama, and St. Tammany Parish in Louisiana.

In its consent order, the FTC indicated that competition would be harmed in the markets in which it required divestiture. Basch (2001) reported an FTC statement indicating the agreement “will remedy the Commission’s competitive concerns about the proposed acquisition by ensuring that Winn-Dixie meets very specific purchasing and compliance requirements before buying supermarkets or sites in the relevant geographic markets.” Winn-Dixie ultimately acquired sixty-eight supermarkets located in Mississippi (54), Alabama (11), Louisiana (3), and Florida (1). In addition, Jitney-Jungle sold another nineteen supermarkets to Bruno’s, a regional competitor, and another several stores to grocers including Fleming, Rouses, Brookshire, Albertsons, and several small firms.

This acquisition presents an interesting situation in which the FTC’s enforcement role was diminished compared with the Albertsons/American Stores merger, but in which some relief was required. Also the geographic markets covered by this acquisition are more localized, generally more competitive (which is why the FTC was less aggressive in its enforcement), and have a higher proportion of small firms. We analyzed the impact of this acquisition over fourteen different geographic markets, taking an approach similar to that in the Albertsons/American Stores merger discussion. As Table 4-4 shows, we divided the markets into three categories: (1) markets in which there was no divestiture of stores from Winn-Dixie (although other limiting conditions were imposed); (2) markets in which divestiture of stores was required; (3) markets in which Jitney-Jungle stores closed and were not acquired or reopened by another grocer.

Table 4-4 HHIs in Relevant Markets

Geographic Markets	1999	2000	2001	Diff 00-01	2002	2003	2004	Diff 04-00
AREAS WITH NO DIVESTITURE								
Alexandria, LA	1084	1201	1443	243	1258	1415	1896	695
Baton Rouge, LA	1086	1252	1763	511	1534	1419	1541	289
Birmingham, AL	2154	2056	2364	308	2536	2134	2859	803
Lafayette, LA	966	1022	1220	199	1496	1670	1918	896
Memphis, TN-AR-MS	1801	1649	1804	155	1980	1803	1882	233
New Orleans, LA	1512	1404	1576	171	1650	1697	1808	403
Panama City, FL	1662	1774	2094	320	2123	2137	2074	300
Mobile, AL	2379	2516	2276	(239)	2245	2173	2925	409
AREAS WITH DIVESTITURE								
Fort Walton Beach, FL	1469	1548	1635	87	1509	1517	1846	298
Pensacola, FL	1774	1795	2274	478	2482	2391	2437	642
Biloxi-Gulfport-Pascalouga, MS	1173	1809	1803	(6)	2441	2321	3497	1,176
AREAS WITH NO ACQUISITION								
Hattiesburg, MS	1808	1792	1872	80	2178	2273	2944	1,152
Pine Bluff, AR	3098	3278	3772	494	3303	2841	2952	(326)
Tuscaloosa, AL	2252	2165	2848	683	2819	2406	2728	563

The post-acquisition HHIs show an increase in concentration in all but two of the geographic markets we examined, and the increase exceeded 100 points in all but two of these. In the three markets where the FTC took action, only one area showed a significant (>100 points) increase in the HHI (Pensacola). Nevertheless, Winn-Dixie captured a larger market share in each of the three markets because several Jitney-Jungle stores closed, and Winn-Dixie picked up these customers. Thus the FTC’s prevention of Winn-Dixie’s acquisition of selected Jitney-Jungle stores had little impact on Winn-Dixie’s ability to gain market share in these markets largely because these stores closed rather than be acquired by a competitor of Winn-Dixie.

In several markets where no direct FTC enforcement action was taken and where Winn-Dixie acquired Jitney-Jungle stores, there was an appreciable increase in market concentration. For example, in New Orleans, the HHI rose by 171 points, largely due to the fact that Winn-Dixie picked up significant market share, and market concentration rose from 1404 to 1576 (and became further concentrated in later years). In Panama City, Florida, an already highly concentrated market, the HHI rose 320 points largely because of Winn-Dixie’s acquisition of one Jitney-Jungle store. It is unclear why no enforcement activity was taken in this market.

While Winn-Dixie acquired sixty-eight Jitney-Jungle stores, Bruno’s acquired nineteen, primarily in Alabama where it already had a strong market presence. In Birmingham, for example, Bruno’s had a dominant position, maintaining a 38 percent share of the market before acquiring five Jitney-Jungle stores. After the acquisition,

Bruno’s share rose to 44 percent. Winn-Dixie was the number two firm in the market, and it acquired one Jitney-Jungle store, with its share rising from 22 to 25 percent. The two market leaders in the Birmingham market increased their share of the total market from 50 percent to almost 60 percent and the HHI rose from 2056 to 2364, certainly a cause for concern under the DoJ Merger Guidelines.

We also examined the entry and exit of small firms in these fourteen markets. As noted, small grocers held a significant share in several markets (Table 4-5). In Baton Rouge, Lafayette, New Orleans, Ft. Walton Beach, and Pine Bluff, small firms held more than 20 percent of the total market. Overall, the post-acquisition share held by small firms remained relatively constant, although there were significant declines in Baton Rouge, Lafayette, and Panama City. In Baton Rouge, Winn-Dixie increased its share as a result of acquiring the four Jitney-Jungle stores, and Albertsons also increased its share by acquiring two Jitney-Jungle stores. Increased concentration by these two firms, together with the expansion of Wal-Mart in this area, likely had an impact on small firms’ declining share, which was furthered by the exit of three small grocers between 2000 and 2001.

Table 4-5 Shares Held by Small Firms in Relevant Markets

Geographic Markets	1999	2000	2001	Diff 00-01	2002	2003	2004	Diff 04-00
AREAS WITH NO DIVESTITURE								
Alexandria, LA	5.2%	3.6%	4.3%	0.7%	10.1%	6.2%	5.8%	2.2%
Baton Rouge, LA	30.4%	25.3%	17.8%	-7.5%	24.3%	22.9%	20.8%	-4.5%
Birmingham, AL	8.4%	5.5%	5.3%	-0.2%	8.8%	8.1%	5.4%	-0.1%
Lafayette, LA	35.1%	34.6%	29.3%	-5.3%	29.9%	26.6%	22.4%	-12.2%
Memphis, TN-AR-MS	13.8%	9.8%	9.7%	-0.1%	12.0%	9.5%	7.5%	-2.3%
New Orleans, LA	18.5%	22.0%	23.1%	1.1%	20.4%	17.7%	15.1%	-6.9%
Panama City, FL	6.6%	6.7%	3.5%	-3.2%	6.1%	6.0%	5.2%	-1.5%
Mobile, AL	4.5%	4.7%	5.8%	1.1%	7.4%	5.8%	5.4%	0.7%
AREAS WITH DIVESTITURE								
Fort Walton Beach, FL	25.5%	26.8%	26.4%	-0.4%	25.1%	23.3%	18.4%	-8.4%
Pensacola, FL	6.1%	5.8%	6.6%	0.8%	4.6%	4.2%	3.8%	-2.0%
Biloxi-Gulfport-Pascalouga, MS	13.5%	13.7%	14.8%	1.1%	11.7%	14.0%	8.8%	-4.9%
AREAS WITH NO ACQUISITION								
Hattiesburg, MS	4.0%	4.8%	6.1%	1.3%	4.1%	4.8%	4.7%	-0.1%
Pine Bluff, AR	25.4%	29.2%	30.7%	1.5%	30.5%	35.6%	32.2%	3.0%
Tuscaloosa, AL	6.4%	6.7%	6.4%	-0.3%	7.6%	6.6%	4.4%	-2.3%

We also examined the number of small firms in each market and found that in five markets the number stayed the same (pre- and post-acquisition), six witnessed a decline (although Winn-Dixie was not present in two of these), and three saw an increase

in the number of small firms (new entrants). The markets small firms entered were not generally ones in which Winn-Dixie was active or held a large share of the market. Again, the exit of small firms seems generally less related to Winn-Dixie's acquisition of Jitney-Jungle stores than to entry and expansion of mass merchandisers, as well as expansion of other supermarket chains such as Publix, Albertsons, and Kroger. The decline in small firms in certain markets seems much more attributable to the entry and growth of Wal-Mart and other mass merchandisers, for example, in New Orleans, Lafayette, Memphis, Pensacola, Biloxi, and Hattiesburg. In Biloxi alone, Wal-Mart increased its share by 44 percent between 1999 and 2004, and the number of small firms declined from twelve to four.

The mass merchandisers in these market areas experienced very significant growth in market share during the period 1999-2004. Over the fourteen market areas we examined, they increased market share by 18 percent on average, a truly remarkable gain over only five years. Only one market experienced a decline, Alexandria, and that was because of the exit of a Super K-Mart. It appears that instead of affording an opportunity for small firms, the closure of many Jitney-Jungle stores provided an opportunity for the mass merchandisers to grow and expand. Indeed, it is not unreasonable to conclude that small firms were harmed less by the acquisition of certain Jitney-Jungle stores by Winn-Dixie and others than by the closure of other Jitney-Jungle stores, which afforded the mass merchandisers in particular the opportunity to drive out small retail grocers. Table 4-6 shows that in the six markets where a significant number of Jitney-Jungle stores closed instead of being sold, a substantial number of small firms exited within a year. Our analysis suggests that these small firms were "replaced" largely by mass merchandisers, and to a much lesser extent by the supermarket chains.

Table 4-6 Relationship Between Closure of Jitney-Jungle Stores and Exit of Small Firms

	Closures	Total JJ Stores	Percentage Loss of Small Firms in 1 Year
Mobile	14	27	15%
New Orleans	10	16	16%
Birmingham	2	7	22%
Pensacola	6	9	25%
Hattiesburg	5	5	40%
Biloxi	7	11	67%

As in the Albertsons investigation, we also considered the impact of macroeconomic variables on small firms. However, our analysis did not shed any definitive light on a potential relationship between changes in macroeconomic conditions (such as unemployment) and changes in market shares or the number of small firms. Correlation analysis indicated a wide range of values, including several markets in which small firm market share increases were positively correlated with the lagged unemployment rate. While other exogenous variables may contribute to the decline in the number of small firms, it appears that mass merchandisers certainly played an important role in the competitive landscape for small firms.

Selected Small and Mid-sized Mergers with No Enforcement Action. Finally, we examined several small mergers and acquisitions of relatively small, local grocers where the FTC ordered no enforcement action. These mergers included SuperValu’s acquisition of three small chains in the Pittsburg, Pennsylvania, area in 1999 and 2000; Giant Eagle’s 2000 acquisition of Hartsville Foods, a family-owned chain of four stores operating in the Canton, Ohio, area; and Kroger’s acquisition of Kessel, a family-owned chain of 20 stores in the Detroit-Flint-Saginaw, Michigan, area. While not all of these acquisitions represent small firms within the Small Business Administration (SBA) definition of small, all were local, small chains with sales barely above the SBA standard. In each case no FTC enforcement action was taken, and based on pre-merger concentration data, such

inaction appears to have been the correct decision. However, we observe that in each case, small firms exited the market.⁴²

SuperValu Acquisitions in Pittsburg Area. In 1999, SuperValu, a national supermarket chain, acquired Alleghany Market, a small local chain of five stores in the Pittsburg area, and in 2000, SuperValu acquired two other small firms, Thomi and Heidelberg Shop ‘n Save. Each of these three small firms possessed 1 to 4 percent of the Pittsburg market prior to the acquisitions, with Alleghany being the largest of the three. Prior to the mergers, SuperValu held only a 1.7 percent share of the market, but by 2001 it had 11.8 percent, largely as a result of these acquisitions, and was the number two grocer in the greater Pittsburg area behind Giant Eagle, which held a 33 percent share of the market. Pre-merger HHIs for this market were moderate (approximately 1200) and post-merger concentration rose to 1324. The FTC took no action, likely because SuperValu had a very small pre-merger share and the market was not overly concentrated. Indeed, in contrast to many markets, with the exception of Giant Eagle, no one firm held more than 5 percent of the market until these acquisitions, and the FTC probably viewed these acquisitions as providing a stronger competitor vis-à-vis Giant Eagle.

This market also had a large number of small firms competing, although the small firm market share dropped precipitously between 1998 and 2004. The drop in market share appears to be largely the result of the expansion of mass merchandisers, while small grocers with fewer than four stores were dropping out of the market. For example, Wal-Mart expanded its share from 5 percent in 1999 to 18 percent by 2004, largely at the expense of small and medium-sized grocers. Giant Eagle and SuperValu saw only a small decline in share, holding 35 and 10 percent shares, respectively, by 2004. Nevertheless, by 2004, the HHI had risen to 1676, a much more concentrated market.

The decline in the share held by small firms in Pittsburg appears to be largely unrelated to the acquisitions made by SuperValu, except for the direct impact, in that these acquisitions eliminated nine stores owned by small or moderate-sized firms.⁴³ This market was relatively unconcentrated (especially in comparison with other large

⁴² Further validating the notion that other macroeconomic factors are at work in the determination of the number of firms remaining/exiting the market.

⁴³ Alleghany had sales in excess of \$25 million and therefore is not classified as a small firm.

metropolitan grocery markets through the United States), and thus it is not surprising the FTC took no action, and indeed it was appropriate for it not to do so. The decline in the number of small grocers in the Pittsburg area was a result of the growth in mass merchandisers as well as the relative inefficiency of many small stores unable to realize the economies of scale necessary to compete with the larger chains.⁴⁴ Even by 2004, small firms continued to hold a 20 percent share of the market, which is unusually high in most large, metropolitan markets across the United States.

Giant Eagle Acquisitions in Canton, Ohio. Giant Eagle, a leading regional supermarket chain in western Pennsylvania, acquired Hartville Foods, a small two-store chain based in Canton, Ohio, in 2000. Pre-merger, Giant Eagle was not a large player, holding only about 3 percent of the market. Hartville had about 7 percent, with sales of about \$30 million. The pre-merger HHI was 1087, indicating a reasonably competitive market. Small firms accounted for about 10 percent of the total market.

As a result of the acquisition, Giant Eagle became only the fifth largest grocer in the Canton area. Primary competitors included Fisher Foods, Apples, Wal-Mart and Bordner; there were no large national supermarket chains in this market. In 2002, Giant Eagle acquired Apples and gained significant share, propelling itself to the second largest supermarket chain in Canton next to Fisher Foods. Market concentration rose as a result of these acquisitions, with the HHI increasing to 1300 by 2003. Nevertheless, as with the Pittsburg market, it appears that this market was relatively unconcentrated, and the FTC properly saw no reason to investigate these acquisitions. The impact of these acquisitions on small firms also appears to be negligible, as small firms continued to hold approximately 10-11 percent of the market through 2004. The Canton market is significantly smaller in total size than Pittsburg, for example, and with the exception of Wal-Mart, Canton has withstood the entry of any of the large, national supermarket chains, providing a niche for many small grocers.

⁴⁴ Singh, Hansen and Blattberg (2006) empirically assessed the role of a Wal-Mart Supercenter entering a local retail grocery market. Results indicate a loss of 17 percent of volume by the incumbent supermarket. In addition, the authors note that Wal-Mart served as a catalyst in a number of national and local supermarket chains filing for bankruptcy.

Kroger Acquisition of Kessel in Michigan. Finally, we also examined the effect of Kroger’s acquisition of Kessel Food Markets, a regional supermarket chain including twenty supermarkets in the Flint-Detroit-Saginaw area of Michigan in 2000. Kroger had a significant market presence—16 percent of the Detroit-Flint market and 6 percent of the Saginaw City market pre-merger—and its share rose to 20 percent in the Detroit area and 24 percent in Saginaw City. Other major competitors in these markets included Meijer and Farmer Jack (owned by A&P). Pre-merger HHIs were relatively low in the Detroit area (less than 1000) but moderately high in Saginaw (1336). Small firms held between 20 and 25 percent of each market pre-merger.

Although this merger involved a large national chain, unlike the two mergers discussed previously, the FTC declined to intervene in this merger either. The FTC decision appears to be based on the fact that the larger of the two geographic markets covered by the merger was unconcentrated, so even though the HHI rose by 150 points (and 300 points in Saginaw), the FTC saw no need for action. Small firms do appear to have been harmed to some extent, particularly in the Detroit-Flint area, as their share fell after the merger and continued to decline thereafter. Interestingly, in the Saginaw market, small firms’ share increased after the merger in 2002 and 2003, although the number of small firms did decline slightly. In addition, the mass merchandisers were relatively unsuccessful in expanding in these markets, a situation that has helped small firms preserve their market position and prevented the exit of many small firms, as witnessed in other areas of the country.⁴⁵

In this section we have reported on several case studies of mergers and different levels of antitrust enforcement activity by the FTC and the consequent impacts on small businesses. In many of the markets we investigated, we observed significant declines in both the number of small grocery establishments and the market share held by small firms. These declines occurred regardless of whether there was antitrust enforcement activity and whether acquiring firms increased their market shares. In the two cases in which concerns

⁴⁵ It appears that consumers have a stronger allegiance to local “mom & pop” grocers in the Midwest than in many other areas of the country, and mass merchandisers have been less aggressive in expanding in these market areas.

about anticompetitive behavior prompted some divestiture action by the FTC, small firms did not benefit in any material way.

The decline of small firms observed in most retail grocery markets has been attributable less to increased concentration resulting from mergers and more to the entry and growth of mass merchandisers, as well as the increased efficiency and cost-cutting of large supermarket chains.⁴⁶ Small firms unable to realize economies of scale and operate on thin margins simply cannot compete in the long run with these larger, more efficient firms. The one area in which small firms may have been directly harmed was in the case of Winn-Dixie, where a number of Jitney-Jungle stores were closed instead of being sold. Here the evidence indicates that small firms were harmed and exited the market because of a decrease in competition. With Jitney-Jungle stores no longer able to provide a constraint on the large firms operating in that market, the large firms were able to drive out some of the small firms.

Timber Industry Case Study Results. The timber industry provides insight into the effects of market power and antitrust enforcement on small firms. The previous case study focused on the effects on small businesses of mergers and varying levels of antitrust enforcement activity. In this case study, we focus on the impact of market power and antitrust enforcement from a supply-side perspective, related to small firms competing as buyers of timber for their sawmills. A primary concern is the ability of small firms to acquire inputs when faced with a single dominant buyer (monopsonist) or a group of dominant buyers (oligopsonists.)

The objective of this case study is to evaluate factors that may influence the sustainability of small firms where a monopsonist restricts small firms' ability to obtain supply on a competitive basis. Also, we examine whether barriers to entry make it more difficult for these firms to compete. A significant area of concern might be dominant firm strategic behavior and conduct, if in fact barriers to entry make it easier to enforce such conduct. For example, if a dominant buyer is able to raise rivals' costs, what are the

⁴⁶ Singh, Hansen and Blattberg (2006) note that given the razor-thin margins in the retail grocery industry, Wal-Mart's "everyday low prices" are difficult, if not impossible to meet. The authors also state that Wal-Mart's size gives the company several advantages over smaller competitors, including bargaining power with manufacturers and economies of scale in distribution systems.

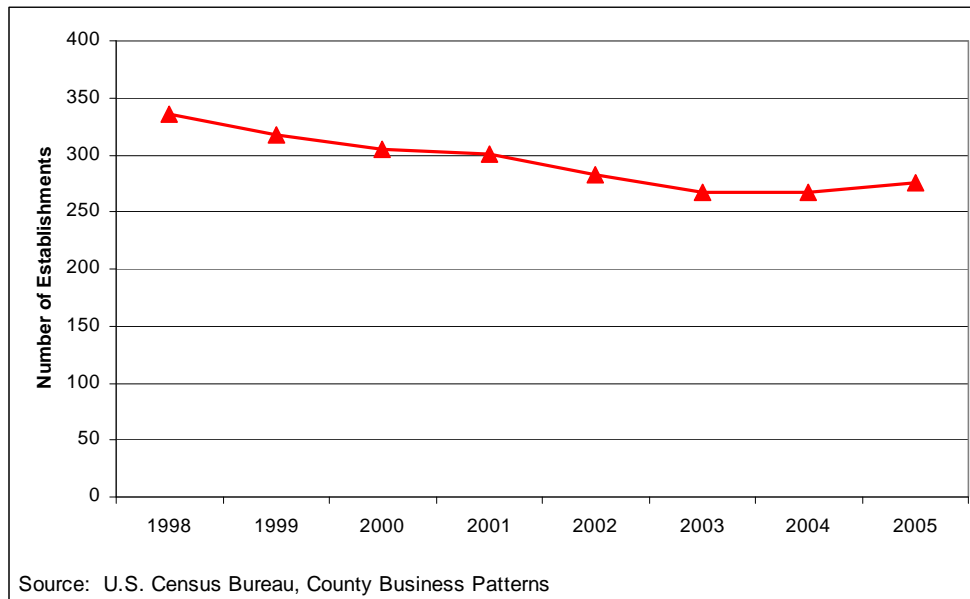
implications for small businesses? While the case study focuses on the timber industry, the theoretical underpinnings of the different factors faced by many small firms have strong applicability to other industries where small firms operate under similar conditions.

Case Study – Ross-Simmons Hardwood Lumber Co. v. Weyerhaeuser, Inc. In recent years, several independent sawmill owners in the Pacific Northwest have filed antitrust lawsuits against Weyerhaeuser, Inc.⁴⁷ The first lawsuit involved Ross-Simmons Hardwood Lumber Co., an independent owner of a red alder sawmill in Washington. Each lawsuit alleged that Weyerhaeuser exercised market power between 1998 and 2002 in the red alder timber market, effectively forcing rivals out of business through anticompetitive behavior. The small sawmills alleged that Weyerhaeuser dominated the red alder market, with an estimated 65 to 75 percent market share in red alder logs and lumber.

Figure 4-2 illustrates the decline in the number of sawmills (including red alder) in Washington and Oregon. Documents from the antitrust cases indicate that 31 Washington and Oregon hardwood mills closed between 1980 and 2001. The small sawmills contended that the decline in small sawmills was the result of Weyerhaeuser exercising market power through a strategy designed to raise rivals' costs and force competitors out of the market.

⁴⁷ Weyerhaeuser, a large, globally diverse forest products company with significant operations in Washington and Oregon, is a vertically integrated timber company, possessing company-owned resources, as well as numerous sawmills.

Figure 4-2 Number of Sawmill Establishments in Washington and Oregon



We examined trends in the number of small and large firms in the timber industry as a whole, as well as in the wood manufacturing segment that includes sawmills. Using data from the Statistics of U.S. Businesses,⁴⁸ we noticed a reduction between 1998 and 2005 in the number of small firms on an industry-wide basis in Washington and Oregon (Tables 4-7 and 4-8).

⁴⁸ The Statistics of U.S. Businesses provides firm counts (as opposed to establishments) based on a 3-digit NAICS code. However, the County Business Patterns data provide a more detailed count of establishments for the full 6-digit NAICS code. In most instances, we did not observe a significant difference in the number of establishments and number of firms. As a result, we employ the County Business Patterns data in situations where we need a more disaggregated sample of companies in a relevant market.

**Table 4-7 Change in Net Number of Firms for Forestry and Logging (NAICS 113)
in Oregon and Washington**

	Size of Firm (Employee Count)				
	< 10	< 20	< 100	< 500	500+
Oregon					
1999	838	963	1038	1045	11
2000	791	923	1007	1011	12
2001	765	880	962	967	11
2002	747	864	949	954	11
2003	721	826	915	921	9
2004	718	831	912	921	10
2005	665	778	857	866	11
Net Change	-173	-185	-181	-179	0
% Change	-21%	-19%	-17%	-17%	0%
Pre-2002	-11%	-10%	-9%	-9%	0%
Post-2002	-11%	-10%	-10%	-9%	0%
Washington					
1999	739	963	907	915	10
2000	695	923	860	869	10
2001	667	880	807	814	10
2002	682	864	814	820	10
2003	610	826	743	749	8
2004	590	831	730	738	8
2005	540	778	669	673	8
Net Change	-199	-185	-238	-242	-2
% Change	-27%	-19%	-26%	-26%	-20%
Pre-2002	-8%	-10%	-10%	-10%	0%
Post-2002	-21%	-10%	-18%	-18%	-20%

Source: Statistics of U.S. Business, U.S. Census Bureau

Table 4-8 Change in Net Number of Firms for Wood Products Manufacturing (NAICS 321) in Oregon and Washington

	Size of Firm (Employee Count)					
	Oregon	< 10	< 20	< 100	< 500	500+
1999		205	963	374	417	46
2000		192	923	359	404	45
2001		204	880	368	412	40
2002		192	864	353	396	36
2003		179	826	345	384	37
2004		180	831	342	384	36
2005		179	778	346	388	37
Net Change		-26	-185	-28	-29	-9
% Change		-13%	-19%	-7%	-7%	-20%
Pre-2002		-6%	-10%	-6%	-5%	-22%
Post-2002		-7%	-10%	-2%	-2%	3%
	Washington	< 10	< 20	< 100	< 500	500+
1999		259	963	427	483	27
2000		245	923	409	463	26
2001		225	880	393	448	19
2002		232	864	395	444	18
2003		239	826	408	455	20
2004		226	831	395	443	21
2005		242	778	415	462	22
Net Change		-17	-185	-12	-21	-5
% Change		-7%	-19%	-3%	-4%	-19%
Pre-2002		-10%	-10%	-7%	-8%	-33%
Post-2002		4%	-10%	5%	4%	22%

Source: Statistics of U.S. Business, U.S. Census Bureau

Although the data include firms operating in a variety of timber production and manufacturing capacities, we observe a consistent decline in the number of firms with fewer than 500 employees. For many firm size classes we observe a decline both during the alleged anticompetitive behavior period and after the initial antitrust lawsuit was filed. The tables highlight two key factors: first, we cannot ignore the role of macroeconomic factors that may affect local and national markets. Second, an industry-wide decline does not rule out the possibility of anticompetitive behavior in particular industry segments, including the small independent red alder mill segment that filed antitrust lawsuits against Weyerhaeuser.

During the initial trial in District Court, Ross-Simmons presented evidence that Weyerhaeuser acknowledged that barriers to entry were high and that the red alder market was a distinct product and geographic market (for example, separate from eastern hardwoods). Furthermore, in the Supreme Court Brief for Respondent (2006) Ross-Simmons argued that Weyerhaeuser established a dominant position in a vulnerable market:

Acquire competitors and expand plants to become the dominant buyer in every part of the region; control most of the raw materials supply through exclusive arrangements; and manipulate the balance of so-called “open” market levels that killed off competition.

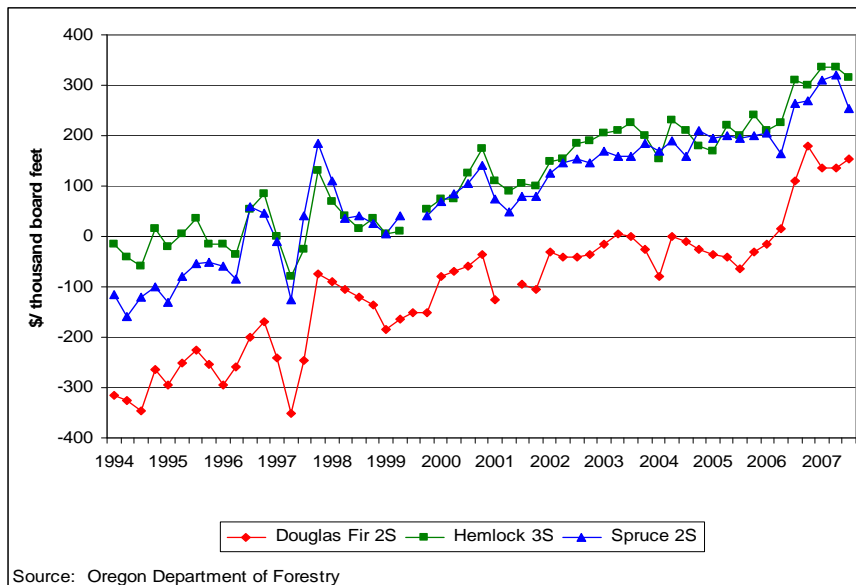
In the initial trial, the jury found that Weyerhaeuser had established a dominant and anticompetitive position in the red alder market and effectively forced out smaller rivals. Principally, Weyerhaeuser employed the following tactics:

- Used exclusive supply contracts with sawlog producers to restrict supply and raise the price of red alder logs;
- Purchased excessive quantities of red alder logs to restrict supply – in fact, Ross-Simmons contends that Weyerhaeuser actually let the excess red alder logs rot in the sawmill yard, as opposed to allowing competitors access to supply;
- Practiced predatory bidding, that is, intentionally drove up the red alder price in open auctions to raise rivals’ costs; and
- Used vertical integration to supply red alder logs from company-owned lands at below-market prices, further undercutting the competition.

From a monopsonistic standpoint, Weyerhaeuser controlled the bulk of the supply and purchased excess quantities to deprive competitors of a needed resource. The practice

of stockpiling and ultimately letting raw materials go to waste demonstrates Weyerhaeuser's anticompetitive behavior that harmed small firms.⁴⁹ For small businesses, the ability to obtain raw material such as timber at reasonable prices was critical to remaining competitive. However, for a monopsonist to increase profits once rivals have been eliminated, the period of increasing red alder prices should be followed by a decrease in prices once competition has been eliminated. One way to ascertain what happened to red alder prices is to look at the trends in the prices of other timber species compared with those of red alder. Figures 4-3 and 4-4 illustrate trends in the price differentials between red alder and other timber species delivered to sawmills in similar regions⁵⁰ in Oregon.

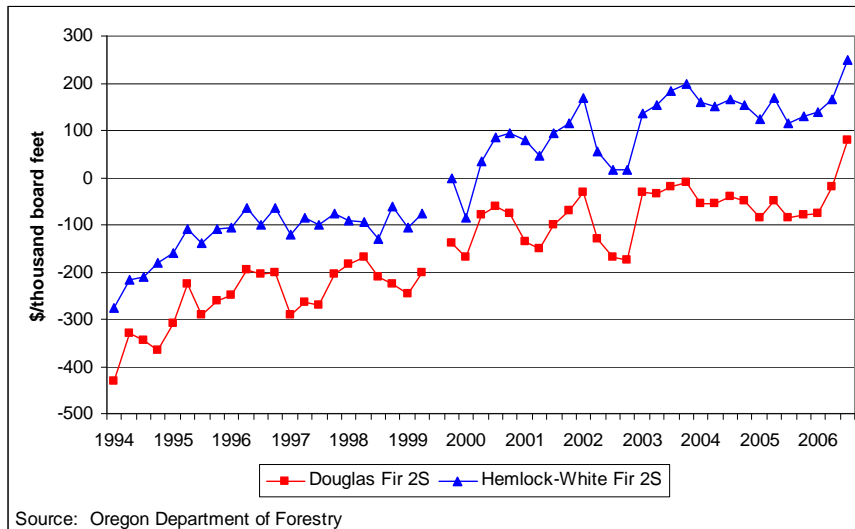
Figure 4-3 Timber Price Differentials in Oregon (Region 1)
Red Alder Price less Other Timber Species Price



⁴⁹ Ross-Simmons Supreme Court Brief (2006) detailed the anticompetitive effects of Weyerhaeuser overbuying alder logs. Weyerhaeuser's stockpiling of logs that eventually went unused deprived Ross-Simmons and other small sawmills from acquiring alder logs necessary to run sawmills at a profitable level.

⁵⁰ Regions 1 and 2 represent the westernmost counties of Oregon and the location of red alder sawmills.

Figure 4-4 Timber Price Differentials in Oregon (Region 2)
Red Alder Price less Other Timber Species Price



In both regions, the price of red alder increased over time in relation to other species. Recall that the small red alder sawmills cannot substitute other species in production and thus cannot turn to these other, relatively cheaper supplies. Compounding the situation was the fact that output prices (e.g., lumber) were not increasing at the same rate as the raw red alder input price, and thus margins were being squeezed. If the dominant firm is able to sustain its strategy of predatory buying to raise rivals' costs above end product selling prices, then small firms will eventually exit the market. In 1998, Ross-Simmons began to experience financial hardship, as increasing red alder prices and supply constraints increased costs and depressed revenues. Ross-Simmons closed their sawmill in 2001, prompting the antitrust litigation.

While there is some indication of anticompetitive conduct by Weyerhaeuser, the decline in sawmills across numerous product and geographic regions indicates that potential anticompetitive behavior by a dominant firm is not the sole cause of small business contraction. Equally important are efficiencies and scale economies that do not involve anticompetitive behavior. In its Supreme Court Brief for Petitioner (2006), Weyerhaeuser responded to Ross-Simmons' claims of predatory buying practices:

A company's decision to purchase an input at prices that one of its competitors believes to be excessive – and thereby obtain a larger quantity of the input – ordinarily has a number of legitimate, pro-competitive explanations... Here, for example, the record showed that Weyerhaeuser invested in its sawmills to increase efficiency. As a result of those investments, Weyerhaeuser was able to produce a larger amount of saleable lumber per log than some of its competitors. Because it realized more lumber and more sales revenue from each log than some of its competitors, Weyerhaeuser could afford to pay more for each log and continue to make a profit; its less efficient competitors faced a harder time making a profit at the log prices that Weyerhaeuser could afford to pay.

While the Ross-Simmons legal proceedings continue, several other small sawmills were able to settle with Weyerhaeuser prior to litigation. Although Weyerhaeuser did not admit to any wrongdoing, the small firms were able to hold Weyerhaeuser liable for perceived anticompetitive behavior. The timber case study highlights the potential difficulties in assessing monopsonistic behavior from a small business perspective. The high costs of litigation and the recent Supreme Court decision may deter small firms from aggressively pursuing antitrust actions against dominant firms. However, the ability of several small firms to recoup economic losses from the perceived anticompetitive behavior indicate opportunities for small firms to successfully negotiate the impacts of antitrust in assessing competitive behavior of dominant firms.

5. Conclusion

Our research investigated the relationship between anticompetitive behavior, antitrust enforcement and small business. We were able to reach the following conclusions:

- In retail grocery markets where merger and acquisition activity prompted antitrust enforcement, the number of small firms declined regardless of the type of enforcement activity;

- Small retail grocery firms did not benefit in markets when the FTC required a divestiture of stores to offset large increases in post-merger concentration;
- Small firm sustainability in the retail grocery industry was less a function of mergers and acquisitions and more the result of the entry and growth of mass merchandisers and the efficiency of large supermarket chains, even in markets where divestiture was targeted to benefit small firms;
- Anticompetitive behavior by a vertically integrated timber industry monopsonist contributed to a decline in small business sustainability in the Pacific Northwest sawmill industry; however, industry-wide trends support the conclusion that macroeconomic factors were equally important in the reduction in the net number of small firms operating in the industry;
- The decline in the number of small firms in the timber industry case was also attributable to efficiency gains and the vertical integration of the dominant firm; and
- The uncertainty over ongoing anticompetitive behavior and antitrust litigation in the Pacific Northwest sawmill industry did not deter new entry, although the net number of small firms declined.

Although our research hypotheses examined specific industries, there are general policy implications for small business. Data analysis shows that increases in market concentration tend to lead to the exit of small firms competing in relevant markets. As market concentration increases, there is the potential that large dominant firms may exercise market power in an effort to increase market share and force smaller rivals out of the market.

One avenue for potential relief is antitrust enforcement by federal and state regulators. However, the goal of antitrust enforcement is to protect competition, which often does not include addressing the needs of small firms specifically. In our retail

grocery analysis, we found that many small firms exited the market regardless of the type or scope of antitrust enforcement. Yet, in our timber industry analysis, we observed that small firms were able to hold a larger dominant firm culpable for anticompetitive behavior. While the antitrust litigation is still ongoing with respect to some firms, other small firms were able to negotiate settlements with the larger dominant firm to recoup economic harm caused by the anticompetitive behavior.

Additional research is needed to assess the long-range impacts of anticompetitive behavior and antitrust enforcement on small businesses. One particularly intriguing avenue is assessing the role of small business entrepreneurs. When small firms successfully introduce new ideas and processes, the potential exercise of market power by dominant firms is diminished as these small businesses dampen the influence of large firms on the competitive landscape. However, the lack of quality data on small business sustainability in select geographic and product market hinders an exhaustive quantitative analysis. As data resources continue to improve, we expect that empirical research will lead to more information on the impacts of anticompetitive behavior and antitrust enforcement on small firms.

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