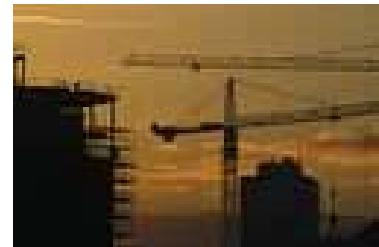


**SUPERCENTERS AND THE TRANSFORMATION
OF THE BAY AREA GROCERY INDUSTRY:**
Issues, Trends, and Impacts



Bay Area Economic Forum

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*A Partnership of the Association
of Bay Area Governments
and the Bay Area Council*



**Supercenters and the Transformation
of the Bay Area Grocery Industry:
Issues, Trends, and Impacts**

Bay Area Economic Forum
a partnership of the Bay Area Council and
the Association of Bay Area Governments

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INTRODUCTION

The nation's retail grocery sector is undergoing a major transformation, led by supercenters – big-box retail stores with full-scale grocery service. These supercenters are the latest development in the nationwide restructuring of the retail grocery industry. Based on efficient distribution systems, low prices, and shoppers increasingly seeking value, supercenters are intensifying competition within the sector. While they are a national phenomenon, supercenters also have important local impacts. Their imminent appearance in California and the Bay Area raises a complex range of issues concerning their costs and benefits, fiscal implications for local governments, and land use policy.

This report is designed to provide decisionmakers with the information and analytical tools needed to make sound decisions regarding the possible development of supercenters in their communities. It refrains from judging whether these facilities are desirable or not, but instead presents the key issues that local decisionmakers will need to consider.

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On-line copies of this report can be accessed on the Bay Area Economic Forum's website at www.bayeconfor.org. The Bay Area Economic Forum is a civic partnership of business, government, labor, university and community leaders that addresses issues impacting the vitality and competitiveness of the Bay Area's economy and the quality of life of its residents. A non-profit public-private partnership, it is jointly sponsored by the Bay Area Council and the Association of Bay Area Governments.

Executive Summary

Transformations in the discount retail industry are rapidly altering the grocery business nationwide, as California will soon learn firsthand. The engine of this change is the retail format known as the supercenter—a big-box retail store that also contains the equivalent of a full-size grocery store, with total floor space often three to four times as large as that of a conventional supermarket. As recently as the mid-1990s, supercenters occupied niche markets and were confined largely to regional chains. In just a few short years, Wal-Mart, the dominant force in American discount merchandising, has used the new format to make itself the dominant national grocer as well. Wal-Mart is now the largest grocer by sales volume and the fifth largest by number of stores. Other discount chains that have experimented with the supercenter format include Kmart (the nation's 22nd largest grocer, ranked by sales) and Target (the 27th largest).

California has no supercenters today but several are proposed to open soon. Wal-Mart alone plans to open 40 in California over the next few years.

Why is the restructuring of the grocery industry important to the Bay Area economy? Based on trends elsewhere, the region can expect substantial impacts of three kinds:

- **Lower prices charged for grocery goods,**
- **Lower wages and benefits paid to grocery workers, and**
- **An array of local development issues, such as traffic and fiscal effects.**

While some changes will be beneficial, others suggest local costs. Due to their magnitude, the distribution and timing of these benefits and costs raise significant issues.

This report thus has two primary purposes: To profile this trend, by estimating these impacts for the region, and to clarify their relevance and complexity at the municipal level. It also outlines a checklist of costs and benefits for communities considering supercenters.

1. Consumer benefits

For most consumers, the clearest advantage of supercenters is the mix of goods offered at lower than average prices. As supercenters achieve sizeable market share, these savings will be significant.

Assuming that supercenters capture between 6 and 18 percent of the region's grocery sales by 2010, total consumer savings on groceries are estimated to range from \$382 million to \$1.13 billion per year in the Bay Area, an important issue given the Bay Area's high cost of living. Through multiplier effects, these savings will generate additional stimulative effects on overall regional spending. While multiplier effects from lower prices are difficult to quantify, the overall regional impact could be up to two times the amount of direct expenditure savings.

Consumers also benefit from one-stop shopping, precluding the need for separate trips to buy groceries and other products. These benefits may be diminished, however, to the extent supercenter shopping requires longer trips, increasing the time and money costs to consumers of shopping travel.

2. Lower wages and their impact on the regional economy

The grocery industry is an important, if often overlooked, source of high-wage entry-level jobs in the Bay Area. The entrance of a low-wage competitor into the grocery industry will likely produce downward wage and benefit pressure on grocery jobs throughout the region.

The average grocery job in the large Bay Area supermarket chains currently pays wages and benefits worth about \$42,552 per year, of which about a third is the value of the benefit package (including health care coverage, vacation, holiday and sick leave). Supercenters will offer total compensation (wages and benefits) estimated at about \$21,000 less yearly per average grocery employee.

As a whole, grocery workers in the Bay Area now earn roughly \$1.5 billion in wages plus benefits. However, if lower wage, big box grocery stores obtain a 6-18 percent market share over the next several years, as indicated in other urban areas, this wage/benefit payroll is estimated to fall by between \$353 and \$677 million.

These direct losses have indirect consequences. Lower regional incomes mean less spending on other goods and services. Through multiplier effects, the net economic impact of this reduction of wages and benefits to the regional economy could be more than double the direct loss, though again such multipliers are difficult to quantify.

3. Local development and fiscal impacts

In many municipalities, land use decisions are linked to fiscal policy, because local governments receive a share of sales tax revenues generated within their borders. California cities thus often seek to so-called sales tax “cash cows,” such as auto dealerships and big-box chains, with promises of zoning variances, infrastructure enhancements, or tax rebates.

However, the bottom-line calculation of supercenter tax revenues is more nuanced than often appreciated. First, an expansion into non-taxable grocery sales will not generate the sales tax revenue per square foot of a conventional discount store. Second, net sales tax revenue will be reduced to the extent that supercenter sales simply displace sales at other stores in the same municipality. At a regional scale, supercenters bring the potential for shifting sales tax revenues across municipalities, creating a regional pattern of winners and losers.

Third, any revenue impact must also be weighed against local public sector costs, such as the traffic, possible vacancies at other retail sites, and the public services required by a supercenter. Local government must consider both the positive and negative externalities of the supercenter format to arrive at the true impact of on public revenues.

For example, supermarkets often anchor neighborhood shopping districts. A loss of a supermarket to big box competition could threaten the economic health of other stores that rely on foot traffic generated by the grocery store. In some cases, supercenters—much as the big-box retail format more generally—could impact the economic vitality of existing downtowns or neighborhood shopping centers.

Changes in retail patterns can also be associated with changes in traffic patterns. In some cases, the low-density, land-intensive nature of a supercenter might be at odds with municipal goals of building at higher densities. On average nationwide, supercenters generate over 3,300 car trips per day. Furthermore, because supercenters are generally located on the urban fringe, they often result in more total vehicle miles traveled (VMT) for grocery shopping in comparison with conventional grocery stores.

It is difficult to predict whether these changes will be viewed as alarming or benign in any particular municipality, but two points are important. First, supercenters have the potential to bring land use changes, and local officials should evaluate these. Second, some of those issues, including growth patterns and the character of traffic flow, are regional in nature, meaning the decisions of one municipality can impose undesired consequences on other municipalities.

This report is intended in part as a tool to assist local governments. Its goal is thus two-fold: To illuminate these broader consumer, employment, wage, land use, and fiscal issues associated with the rise of supercenters, and to articulate their regional implications.

The bulk of the report is an industry analysis of both big-box retail and grocery sales. It focuses on Wal-Mart because that firm is by far the national leader in supercenters, and because it is, to large extent, driving the rapid transformation of the grocery industry. In 1994, Wal-Mart had 147 supercenters; in 2002 it had 1,258. During that time, no other national chain came close to achieving a similar growth in supercenters. In the near term, Wal-Mart is the most likely developer of supercenters in the Bay Area.

In the end, the report is cautionary. Supercenters are part of a national and even international change in the retailing and grocery sectors, and those changes, like many other economic restructurings, bring both costs and benefits. Lower consumer prices and efficiency gains should be weighed against the direct and indirect effects of lower wages and benefits in the retail grocery sector, and fiscal and land use impacts that are substantially more complex than conventional "fiscal boon" scenarios assume. The entry of the world's largest grocer into California is anything but simple. At the same time, the basic facts are straightforward.

TABLE OF CONTENTS

Executive Summary	1
1. Consumer benefits	1
2. Lower wages and their impact on the local economy	2
3. Local development and fiscal impacts	2
List of Figures	6
List of Tables	6

SECTION I: OVERVIEW AND TRENDS

Overview	7
Chapter 1: Supercenters and the Grocery Industry	11
The rise of discount retail	11
The advent of the supercenter.....	12
Grocery Industry Overview	13
Supercenters	16
Top chains	17
Current conditions and projected growth	19
Implications for the grocery industry	21
Wholesale clubs and “Neighborhood Markets”	22
Chapter 2: Supercenters in the Bay Area: Market Share Scenarios	24
The study area and existing big box retail locations	24
Projected Bay Area supercenter market share.....	26

SECTION II: PRICE AND WAGE IMPACTS

Chapter 3: Consumer Benefits	30
Benefits of supercenter discount prices.....	30
Average prices of grocery items.....	30
Effect on prices in other stores	31
Market capture.....	31
Calculation of reduced expenditures	31
Discount retail and productivity increases	32
Chapter 4: Impacts on Regional and Local Grocery Industry Wages and Employment	34
The importance of the grocery industry in the Bay Area	34
Bay Area comparison of supermarket and supercenter wages and benefits	37
Unionized supermarket wages in the Bay Area	37
Supercenter wages	39
Benefits comparison	43
Comparison of wages and monetized benefits	46
Wage and benefits impact analysis.....	48

SECTION III: LOCAL DEVELOPMENT IMPACTS

Chapter 5: Land Use and Traffic Impacts51
 Size and footprint 52
 Location questions..... 54
 Traffic 57
 Trip length 58
 Trip frequency 59
 Estimates of travel-related supercenter costs 60

Chapter 6: Other Potential Community & Economic Development Impacts62
 Wal-Mart in rural communities 64
 Economic development 65
 Wal-Mart impacts in urbanized markets 66
 Intangible Effects: Aesthetics, Tourism and Activism..... 67
 Greyfields and ghostboxes: The problem of vacant retail space 67
 Recapture Clauses 71
 Remedies and Local Circumstances 72
 Summary..... 73

Chapter 7: Potential Fiscal Impacts74
 Overview 74
 The fiscal landscape in California 75
 Impacts on municipal tax revenue 76
 How much taxable revenue will a supercenter generate? 78
 Revenue stability of the supercenter format 79
 The subsidy process..... 79
 Summary..... 80

SECTION IV: POLICY

Chapter 8: Policy and Practice.....82
 Issues 82
 A checklist for local officials 83

References85

APPENDICES

Appendix A: Estimates of Grocery Market Share, 201091
 Current market shares..... 91
 Supercenter per-store revenue 95
 Supercenter market share estimates for study area, 2010..... 97

Appendix B: Employment and Payroll Comparisons with Similar Industries99

LIST OF FIGURES

Figure 1: Average supermarket size, US, 1990 to 2002.....	17
Figure 2: Study area counties	26
Figure 3: Big box retail stores in study area, 2003.....	26
Figure 4: Location of Wal-Marts in the Bay Area	57
Figure 5: General merchandise and food stores as a percent of retail taxable sales, California	80
Figure 6: General merchandise and food stores, taxable sales per permit (\$ thousands).....	81

LIST OF TABLES

Table 1: Supermarket facts, 2002.....	14
Table 2: Grocery store sales by size and ownership, 2002.....	15
Table 3: Sales per store, 2001 to 2002 (\$million)	17
Table 4: Selected top grocers nationwide, 2003.....	18
Table 5: Top grocers, 2003 - ratio calculations	19
Table 6: Supercenter industry growth trends by company	20
Table 7: Wal-Mart store counts in selected markets, 2003	20
Table 8: Market share scenarios, Wal-Mart supercenters, 2010	28
Table 9: Estimated Consumer Grocery Expenditure Savings, by Market Share.....	31
Table 10: Total employment, Bay Area, 2001	35
Table 11: Employment in the grocery industry, Bay Area, 1998 to 2001.....	36
Table 12: Yearly payroll per employee in the grocery industry, Bay Area, 1998-2001	37
Table 13: Wage schedule for food workers and non-food workers, 2001 to 2003	38
Table 14: Average wages for unionized supermarket employees, 12-county study area, 2003.....	39
Table 15: Wal-Mart full-time employment as percent of total, 1999-2001	41
Table 16: Wal-Mart average wage if employed at least one year & active at year-end, 2001	42
Table 17: Benefits comparison	44
Table 18: Wal-Mart health and welfare benefits estimate, 2000.....	45
Table 19: Wal-Mart average per hour contribution to retirement savings plan, 2000	46
Table 20: Comparison of estimated wages and benefits for unionized supermarkets.....	47
Table 21: Wage and benefits impact estimate, 2010.....	49
Table 22: Average Distance to Grocery Stores from Selected Zip Code Centroids	59
Table 23: Estimates of Additional Driving Costs Due to Supercenter Entry into Bay Area	61
Table A1: Population & effective buying income for submarkets (except Sonoma County).....	92
Table A2: Market share by distributor, study area (except Sonoma County)	93
Table A3: Market share by chain, study area (except Sonoma County)	94
Table A4: Market share and revenue per store, San Francisco MSA, 2003.....	95
Table A5: Wal-Mart supercenters for selected metropolitan areas, 1997 to 2003	96
Table A6: Size of future market, supermarket sales.....	97
Table A7: Market Share Scenarios, Wal-Mart Supercenters, 2010	98
Table A8: Employment in the food and drinking place industry, study area, 1998 to 2001	99
Table A9: Payroll per employee in the food and drinking place industry, 1998 to 2001.....	100
Table A10: Employment in department stores, 1998 to 2001	100
Table A11: Payroll per employee for department stores, 1998 to 2001.....	101
Table A12: Employment in the accommodation industry, 1998 to 2001.....	101
Table A13: Payroll per employee in the accommodation industry, 1998 to 2001	102
Table A14: Employment in the construction industry, study area, 1998 to 2001	102
Table A15: Payroll per employee in the construction industry, study area, 1998 to 2001.....	103

SECTION I: Overview and Trends

Overview

In the last decade, the supermarket industry in the United States has undergone a substantial transformation. Driven by a number of factors, including the consolidation of large grocery companies, one of its primary engines has been the rise of the supercenter—a hybrid format that puts an entire supermarket within a big box retail discount store. The impact of supercenters has been quickly felt: Wal-Mart, which as recently as the mid-1990s was a marginal player in the American grocery sector, is today the number one grocer in the nation by sales, and the fifth largest by number of stores. Other discount merchants that have entered the grocery industry include Kmart, which is now the nation's 22nd largest grocer ranked by sales, and Target, which is the 27th.

The meaning of these changes is loudly debated. As this report was being completed, Southern California was in the midst of a lengthy grocery employee strike in part motivated by the possible entry of supercenters into the region. In the Bay Area, proposals to regulate supercenters have been debated in Contra Costa County. In this sometimes charged environment, local officials are typically the first line of policy activity. Municipal governments throughout the Bay Area might find themselves being asked to consider the implications of supercenters in their communities.

Yet the matter is complex. This report is intended as an educational aid to assist local governments as they consider the question of supercenters in their communities.

Although the supercenter is a fairly straightforward format—in one sense, it is just a larger box with a still larger parking lot—bound up within the supercenter model is a complicated array of potential impacts on local labor markets, land use, traffic, the fiscal condition of cities and the economic character of neighborhoods. Many of these issues are familiar, but perhaps do not get the attention they deserve; others are too often not considered at all. It is all too easy to think of shifts in the grocery industry as purely private phenomena, and beyond the concern of those who make public policy. The purpose of this report is to impress upon municipal leaders that what happens to the grocery sector can impact the community and the local economy, and that proposals for supercenters should be considered with care. This document should be a useful first step in developing more useful evaluations of large-scale retail projects.

Based on experience elsewhere in the country, several impacts of supercenters are clear:

- ◆ Supercenters will bring a substantial drop in grocery prices compared to traditional supermarket chains.
- ◆ Supercenters will bring substantial downward pressure on wages and benefits in the grocery sector.
- ◆ Supercenters will bring a host of complex land use, traffic, and fiscal impacts. Many decisions will fall to municipal and county governments, even if the impacts will be regional as well as local.

This report deals with each of the above impacts in turn, in some cases simulating possible scenarios to illuminate their magnitude. In other cases, quantifying the impact is not possible, so instead the issue is discussed in more qualitative terms.

This report is divided into four major sections. Section I provides background, first on the grocery industry and then on the possible development of supercenters in the Bay Area. This section provides context for local officials who will soon have to understand this transformation in the retail sector. Section II begins the examination of supercenter impacts by looking at, in turn, the effect of supercenters on consumer prices and on grocery sector wages and benefits. Section III examines local development impacts associated with supercenters. Section IV discusses policy options from the perspective of local governments. Each of these sections is composed of one or more chapters, and as overview those chapters are briefly discussed below.

The supercenter is a hybrid of both the grocery and retail sectors, and to be comprehended it must be viewed in the context of both, and not as a typical big box store. This requires a perspective larger than the purely local. Chapter 1 provides that context by providing background on discount retail, the grocery industry, and the national trend toward supercenters. Supercenters are arguably another step in retail's transformation from an urban-based, service-oriented industry to a more suburban or exurban, value-driven sector. The first chapter provides an overview of these changes at the national level, and identifies the major players in both the grocery and retail fields. This chapter also discusses the logic behind supercenters, their implications for the grocery industry, and how large supermarkets across the country are reacting to the prospect of supercenter competition.

Having established the national trend toward supercenters and the forces that are driving it, Chapter 2 looks at the potential for supercenter growth in the San Francisco Bay Area. Grocery market share estimates are constructed under various scenarios. The estimates are based on analysis and the experiences of other metropolitan areas.

Starting Section II, Chapter 3 begins the discussion of likely supercenter impacts by noting that Wal-Mart supercenters, in particular, offer consumers significant price advantages over traditional supermarkets. These lower prices can benefit consumers (particularly consumers with lower incomes). The potential consumer benefits of Bay Area supercenters are estimated. This is also discussed, as it is important context in understanding the benefits that supercenters bring to local and regional economies.

The source of Wal-Mart's consumer price advantage is multi-faceted, and includes pioneering efficiencies in distribution, the use of technology, and the application of new management techniques. The net result of these and other efficiency gains are discussed in Chapter 3. Yet another source of Wal-Mart's price advantage is less innocuous – Wal-Mart typically offers lower wages and benefits than do major Bay Area supermarket chains. This is examined in Chapter 4.

Chapter 4 calculates the labor market impacts of supercenter growth. Supermarket employment is an often overlooked but important source of entry-level employment. Using the best available data on both Bay Area grocery industry wages and benefits and total compensation typically offered at Wal-Mart, supercenter jobs will pay \$11.68 per hour less than typical supermarket jobs in major Bay Area grocery chains. Should discount retail companies gain a significant portion of the grocery market in any part of the Bay Area, a clear potential impact would be a falling

average wage in the grocery sector, as well as a falling average value of the benefits offered to grocery workers.

Discount prices also necessitate more space and more consumers; the success of discount retail is dependent to a large extent on selling more goods to more people. As more and more consumers converge on a single location, an inevitable concern is worsening vehicle traffic, and the distortions of urban form that can be caused by autocentric retail development. Supercenters are huge buildings designed to be shopped by people in cars, which means they have extremely large parking lots. Aside from the accommodation of automobiles, the amount of land necessary for a supercenter also generally requires them to be located on the fringe of urban areas, raising the question of whether supercenters contribute to residential dispersal and urban decentralization. Alterations to urban form that encourage sprawl are costs, albeit hard ones to quantify. These issues are discussed in Chapter 5.

A topic often mentioned along with traffic and land use patterns is the impact discount retail has on smaller, more pedestrian-oriented shopping districts, and in particular on downtowns. Although much of the evidence that has been gathered on this topic addresses conventional discount stores, rather than supercenters, what is available should be of interest to policy makers, and is in many ways still relevant to discussions of the new food/retail formats.

More importantly, a discussion of downtowns' diminished vitality also reinforces the crucial lesson that while consumers may enjoy the newer format of one-stop shopping, towns and cities can pay a price in the form of vacant buildings and empty lots that once generated revenues. Chapter 6 reviews the current research on the economic impacts of new big boxes, including this question: When does retail development represent true economic growth, and when does it simply cannibalize existing markets? While analyzing the sales tax revenue generated, policy makers must consider the generated sales tax revenue displaced to supercenters from preexisting businesses, or completely lost due to the failure of businesses competing with retail giants. The chapter also surveys the evidence on retail blight—its causes, consequences and possible solutions.

There is also the question of fiscal impacts. For towns and cities, one of the most alluring aspects of discount retail stores is their potential to yield sales tax revenue. For municipalities in California, whose ability to collect property taxes has been greatly restricted, this is no small matter, and has in a number of instances led to "locational tournaments," in which communities compete with each other, at times through hefty subsidies, to have a big box locate within their borders. This is not a new story, but the advent of supercenters does throw an unfamiliar twist into it. Most grocery items are not subject to sales tax, so the expansion of a discount store into a supercenter may not be accompanied by a corresponding expansion in sales tax revenue. The true fiscal impact of big box discount retail is more complicated than a simple calculation of sales tax revenue, and the perceived fiscal benefit of a conversion to the supercenter format is much more ambiguous. This is taken up in Chapter 7.

Finally, Chapter 8 summarizes the report's discussion of the costs and benefits of supercenters with respect to policy issues. The chapter also surveys the various initiatives that communities across the country have taken in response to supercenters, ranging from accommodation, to grassroots opposition, to efforts to prohibit the format by law. The report does not endorse any of these measures, offering instead a cautionary message. It would be an oversimplification for localities to assume that supercenters bring no issues of public concern, and it would be likewise

ill advised for municipal officials to focus exclusively on tax revenue without weighing the less obvious but equally real impacts supercenters can have on labor markets.

The evaluation of a supercenter should ideally include not just an analysis of its costs and benefits, but also how costs and benefits are distributed. If costs and benefits are borne by the same groups, then a simple assessment of whether benefits exceed costs is sufficient. But if costs are concentrated in one segment of the community while the benefits are more widely distributed, there may be additional policy considerations.

Chapter 1:

Supercenters and the Grocery Industry

The U.S. grocery industry has been dramatically transformed in the last ten years by the advent of supercenters—large stores selling a full line of groceries and drugstore items along with a full assortment of retail goods. The story of this restructuring is complex, including consolidation in the traditional grocery industry, and a shift in consumer preferences from a service orientation to a greater emphasis on low prices. In many ways, supercenters are the merging of the discount retail and the grocery industry—two sectors that, until just a few years ago, were distinct industries in the United States. Because a discussion of the impact of supercenters on the Bay Area requires an understanding of the changes in the discount retail and grocery sectors, the section begins with some background on the discount retail industry, followed by a profile of the grocery industry.

The rise of discount retail¹

Until the turn of the last century, most goods were sold through individual specialty stores. Between 1900 and 1920, merchants in and around Boston began combining the operations of several specialty shops under one roof, and gave birth to the modern department store. A leader in the transition was Filene's, a company that originally sold only women's wear and accessories. At the turn of the century, Filene's began to acquire more space, sell new products, and remove the partitions that had once separated different wings of its stores. Shortly after it opened it developed a segment called the "bargain basement," where brand-name merchandise (mostly but not exclusively apparel) was offered at a drastically reduced price.

At first, the bargain basement was viewed with skepticism and scorn by industry observers, who widely expected it to fail. Department stores at that time were often lavish affairs, well-decorated and situated in expensive downtown locations (Fogelson 2002; Cohen 2003). They were also full-service establishments with large sales staffs that worked mostly on commission. The bargain basement lacked all of these amenities, which explained its broadly anticipated failure. But the format allowed Filene's to broaden its customer base, to attract consumers who otherwise could not afford brand-name clothing, and to build customer loyalty among the working classes. During the Great Depression, the bargain basement kept Filene's alive, reaping profits while the full-service establishment operated at a loss.

Spurred by the success of Filene's, other department stores began to open their own bargain basements, and soon freestanding discount stores, unattached to any large department store chains, began to pop up as well. By 1977 discount retail, with \$39.2 billion in sales, was the largest sector of general merchandising, and the handful of discount outlets that had existed in the 1950s had expanded to almost 7,400. The undisputed champion of discounting at this point was the Detroit-based Kmart, which in 1975 had over 1,200 stores and in 1976 added more than

¹ Unless otherwise noted, the historical material in this section is drawn from Bluestone, et al. (1981).

one new store every working day.² Kmart's expansion bankrupted many of the regional discount chains, and also seriously harmed the profitability of full-service department stores such as Sears, JC Penny, and Montgomery Ward, forcing them to reposition themselves as more specialized enterprises. Kmart remained in this position for roughly a decade, until it was itself underpriced by Wal-Mart.

Like Kmart, Wal-Mart stores first opened in 1962. Unlike Kmart, however, and indeed unlike many other discount pioneers, the company began in the South. After Sam Walton opened a discount five-and-dime in Bentonville, Arkansas, the first Wal-Mart was opened in the nearby town of Rogers. Until relatively recently its growth has been contained within the southern and rural heartland states, where it was able to build power and customer loyalty without competing directly with Kmart. This enabled Wal-Mart's rapid growth, and let the southern company avoid directly competing with what were then Kmart's larger economies of scale (Hornbeck 1994). It also, and perhaps more importantly, forced the company early on to embrace technological advances in supply and distribution systems.

The decision to remain in rural areas largely prevented Wal-Mart from using existing retail distribution networks. It was expensive to deliver goods to Wal-Mart's stores, and vendors often wanted to charge high premiums for shipping goods so far away from metropolitan centers (Standard and Poor's Retailing Supplement 2003). The company began to experiment with ways to lower its supply and distribution costs. It opened the nation's first distribution center in 1970, marking the first time a firm had asked vendors to deliver goods to a central warehouse location rather than individual stores (Wal-Mart Corporation Official Timeline). These distribution centers came to define how Wal-Mart grew. A distribution center was set up; stores were arrayed around it, generally not more than 20 miles away; over time, the capacity of the center was taxed as product turnover increased; and another distribution center was built in another location (Graff 1998). Wal-Mart's use of technology, and its influence on productivity in both the retail sector and the American economy as a whole, is discussed in more detail in Chapter 3.

The advent of the supercenter

The appeal of combining retail and grocery operations is not new. As early as the 1960s, industry specialists recognized the potential in merging discount stores and supermarkets. In contrast to today, in the 1960s it was the grocery chains that began buying their way into the discount arena, rather than the other way around. In 1961 the Stop & Shop chain of Boston, Massachusetts purchased the Bradlees regional discount chain, out of a desire to locate its supermarkets adjacent to discount retailers (Bluestone 1981). These stores did not put grocery under the same roof as retail, although they did put it under the same ownership. They were also regional, rather than national, chains.

These early experiments were not the model on which the contemporary retail/grocery supercenter is based. Rather the supercenter of today is a slightly smaller version of the European hypermart, a massive big box combination whose average size is about 250,000 square feet. In the 1980s, both Kmart and Wal-Mart attempted to re-create hypermarkets in the United States. Wal-Mart opened a division called Hypermart USA, and Kmart created one called American

² Kmart was formerly the S.S. Kresge Corporation; it changed its name in 1977.

Fare. The extra-large format proved unpopular, and both companies soon scaled back to supercenters, which are about 170,000 square feet, with about 70,000 square feet of that being grocery space. Wal-Mart's first supercenter was unveiled in 1988, and Kmart rolled out its inaugural Super Kmart in 1991 (Graff 1998; Wal-Mart Corporate Timeline 2003).³

Kmart and Wal-Mart pursued different strategies in choosing where to locate their supercenters. Graff (1998) documented that almost half of Wal-Mart's 332 supercenters were in counties of less than 50,000 people; the average population of a supercenter county was 105,000. Super Kmart's tended to be in larger markets. Wal-Mart Supercenters and Super Kmart's competed directly in only 19 counties nationwide, and in a number of these areas the Wal-Mart Supercenters were actually converted Hypermarts—the Hypermart, unlike other Wal-Mart holdings, had been introduced in more densely populated regions.

When the company did bring out supercenters, it did so in low-risk areas. Almost all of the original supercenters were replacements of existing discount stores, and many of the stores replaced were in its oldest and most profitable locations. To date some two-thirds of Wal-Mart's Supercenters have come from discount store conversions (Barry 2003). Opening supercenters as replacement discount stores meant Wal-Mart could enter the grocery sector in areas where it already had strong identification and loyalty from customers. Just as it had done with discount stores, the company would build its strength in places where circumstances were aligned in its favor (Graff 1998).

Grocery Industry Overview

Food stores are a major U.S. industry, with over 3.4 million employees and \$535 billion in sales in 2002 (Table 1). The average customer visits more than twice a week, spending about \$25 per trip.

They are also an increasingly diverse lot. The largest industry category is "Supermarkets," representing only 20 percent of grocery stores but over 75 percent of revenues. However, in addition to conventional grocery stores, this group officially includes supercenters, combination grocery and drugstores, and warehouse-style grocers in which customers bag their own groceries (Table 2). The remaining \$123.6 billion in official supermarket sales is mainly in smaller grocery stores and convenience stores, and some sales in wholesale clubs and military commissaries.

³ Note that, because these estimates of supercenter floor area and grocery floor space come from different sources than what was cited earlier in the report, the floor space estimates are not exactly consistent. Graff (1998), for example, estimates supercenter grocery area at 70,000, whereas the market data cited earlier suggest that supercenters offer 60,000 square feet of grocery floor area.

Table 1: Supermarket facts, 2002

Supermarket employment (mil.)	3.5
Number of grocery stores	166,135
Number of supermarkets (\$2 mil. or more in annual sales)	32,981
Averages	
Supermarket size (sq.ft.)	44,000
Average number of items (SKUs)	35,000
Number of trips per week by consumers	2.2
Sales	
Total grocery stores sales (bil. \$)	\$535.4
Total supermarket sales (bil. \$)	\$411.8
Weekly sales per supermarket (\$)	\$361,564
Weekly sales per sq. foot of selling area (\$)	\$11.13
Sales per customer transaction (\$)	\$24.63
Sales per labor hour (\$)	\$137.68

Compiled by Food Marketing Institute at www.fmi.org/facts_figs/superfact.htm.
From US Departments of Labor and Agriculture, Bureau of the Census,
Progressive Grocer, and Food Marketing Institute.

Though not considered supermarkets by official industry definitions, “Wholesale clubs,” such as Costco and Sam’s Club, accounted for \$27.4 billion in sales last year. Though only 5 percent of total food sales, this is an average of \$28.2 million per store, the highest per store number in food sales. The remaining part of the industry consists of “Small grocers,” defined as stores with less than \$2 million in annual sales, as well as convenience stores. Nationwide, about 23 percent of grocery revenue is attributed to these smaller stores. In the Bay Area, like most urbanized areas, the figure is less, about 15 percent.⁴

Within the supermarket category, about two-thirds of sales are accounted for by stores in supermarket chains. So-called independent supermarkets, or those with ten or fewer stores, account for the remaining third.

Significantly, chain supermarkets continue to slowly increase their share of the total, growing 4.4 percent between 2001 and 2002, while the volume of sales by the independents dropped a percentage point. The most striking change from 2001 to 2002 was an increase in the total sales accounted for by the largest chain supermarket stores—those with \$30 million or more in revenues. These firms increased revenues 54.2 percent from 2001, though not quite as fast as the 55.2 percent increase in the number of stores.

Part of this growth can be accounted for by “supercenters,” described further below, whose revenues increased about 17 percent, largely via an increase in the number of stores. But supercenters are only a part of the story. The remainder is likely attributable to an increase of revenues among stores in the \$20 to \$29.9 million range, which moved them up to the higher

⁴ In the San Francisco-Oakland IRI InfoScan market (San Francisco, San Mateo, Marin, Santa Clara, Oakland and Contra Costa counties), it is 14.2 percent; in the Monterey-Salinas DMA market (Monterey, San Benito and Santa Cruz counties), it is 19.4 percent; in the Vallejo-Fairfield-Napa MSA (Napa and Solano counties), it is 10.8 percent.

category, as well as by the replacement of small stores with larger ones among the conventional grocery store chains.

Table 2: Grocery store sales by size and ownership, 2002

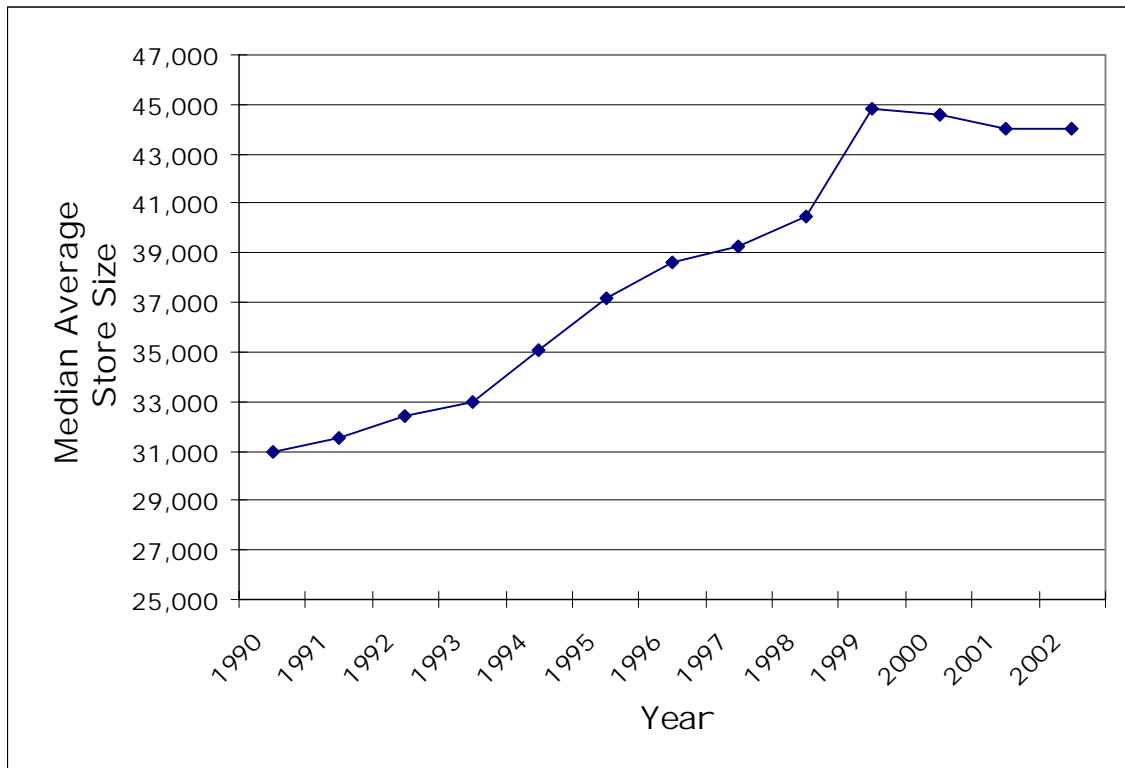
	No. of Stores	Pct. of Total	Pct. Change, 2001- 2002	Sales (\$billion)	Pct. of Total	Pct. Change, 2001- 2002
All supermarkets, by format, total	32,981	100.0	2.2	411.8	100.0	3.4
Conventional	16,807	51.0	(2.3)	145.1	35.2	1.9
Limited assortment (under 1,500 items)	2,500	7.6	25.0	13.0	3.2	42.9
Warehouse (low price/service)	535	1.6	(33.1)	2.9	0.7	(69.5)
Supercenter* (75,000 sq.ft. min.)	1,789	5.4	15.0	45.8	11.1	16.8
Superstore combo (30,000 sq.ft.min.)	11,350	34.4	6.1	205.0	49.8	3.5
All supermarkets (over \$2.0 million)	32,981	100.0	2.2	411.8	100.0	3.4
Chain supermarkets (\$ millions)	21,560	65.4	2.1	340.5	82.7	4.4
\$2.0 - \$3.9	1,490	4.5	6.7	4.3	1.0	7.5
\$4.0 - \$7.9	3,640	11.0	2.1	21.7	5.3	1.9
\$8.0 - \$11.9	3,545	10.7	(1.3)	34.4	8.4	(1.4)
\$12.0 - \$19.9	5,911	17.9	2.8	88.8	21.6	2.2
\$20.0 - \$29.9	3,939	11.9	(18.8)	89.3	21.7	(21.0)
\$30+	3,035	9.2	55.2	101.9	24.7	54.2
Independent Supermarkets+ (\$ millions)	11,421	34.6	2.4	71.3	17.3	(1.0)
\$2.0 - \$3.9	4,789	14.5	10.6	13.9	3.4	10.3
\$4.0 - \$7.9	4,333	13.1	(2.9)	24.4	5.9	(3.2)
\$8.0 - \$11.9	1,161	3.5	(1.8)	11.3	2.7	(1.7)
\$12.0 - \$19.9	760	2.3	(1.0)	10.9	2.6	(1.8)
\$20.0 - \$29.9	226	0.7	(12.4)	5.2	1.3	(11.9)
\$30+	152	0.5	(2.6)	5.6	1.4	(1.8)
Other food formats, total*	133,154	NA	5.6	123.6	NA	3.6
Grocery/convenience/gas	132,000	NA	5.6	92.5	NA	2.8
Wholesale club stores	972	NA	6.8	27.4	NA	6.6
Military commissary	182	NA	(7.1)	3.7	NA	2.8
Total Grocery Stores	166,135		4.9	535.4		3.4

NA - Not available, * Supermarket items only, + Defined as 10 or fewer stores under one management

Source: Progressive Grocer, Annual Reports of the Grocery Industry, as reported in Agnee (2002, 2003).

The physical size of supermarkets varies greatly (Figure 1), and is growing on average. Some chains, like Whole Foods, prefer a relatively small footprint of about 25,000 square feet of sales space, while the major traditional supermarket chains like Safeway and Ralph’s (now owned by Kroger) have averages closer to 40,000 square feet. Newer stores are closer to 60,000 square feet in size, which is roughly equivalent to the amount of grocery floor selling space in many supercenters. Both Safeway and Albertson’s have stores in the 60,000 square foot range, many of which sell both drugstore and grocery items. Since 1990 the average store size has increased from 31,000 to 44,000 square feet, a 42 percent increase.

Figure 1: Average supermarket size, US, 1990 to 2002



Source: *Food Marketing Industry Speaks* (http://www.fmi.org/facts_figs/keyfacts/storesize.htm)

Supercenters

The newest format in this family is the supercenter, defined as a full sized discount retail store with a full sized grocery store under the same roof. Supercenters averaged about \$25.6 million in grocery revenues per store in 2003. That is substantially more than the average of \$8.63 million in sales for conventional stores (which includes the smaller independents), or the average \$15.79 million for stores in large chains (Table 3).

Table 3: Sales per store, 2001 to 2002 (\$million)

	2001	2002	Percent Change
All supermarkets, by format, total	12.34	12.49	1.2%
Conventional	8.27	8.63	4.3%
Limited assortment (under 1,500 items)	4.55	5.20	14.3%
Warehouse (low price/service)	11.88	5.42	-54.4%
Supercenter (75,000 sq.ft. min.)	25.21	25.60	1.6%
Superstore combo (30,000 sq.ft.min.)	18.50	18.06	-2.4%
All supermarkets (over \$2.0 million)	12.34	12.49	1.1%
Chain supermarkets (\$ millions)	15.46	15.79	2.2%
Independent Supermarkets (\$ millions)	6.45	6.24	-3.3%
Other food formats, total	0.95	0.93	-1.9%
Grocery/convenience/gas	0.72	0.70	-2.7%
Wholesale club stores	28.24	28.19	-0.2%
Military commissary	18.37	20.33	10.7%
Total Grocery Stores	3.27	3.22	-1.4%

Source: Calculations based on data from Agnee (2002, 2003).

Top chains

The top grocery chains in the country in 2003 are shown below. Some primarily operate supercenters: Wal-Mart (1), Meijer (12), Kmart (22) and Target (27) are the biggest of these. The figures for supercenters are all corrected to correspond to the grocery portion of the stores, but the formulas used by the companies and by the main source for industry statistics, *Progressive Grocer*, are imperfect.

Table 4: Selected top grocers nationwide, 2003

Rank	Chain	Number of Super-markets	Estimated Annual Sales (Millions)	Square Feet Selling Area (Thousands)	FTEs
1	Wal-Mart	1,336	48,742	82,106	428,108
2	Kroger	2,482	44,782	98,616	196,195
3	Safeway	1,581	29,355	57,781	107,492
4	Albertsons	1,589	28,461	73,859	127,295
5	Ahold	1,270	25,010	49,206	98,223
6	Delhaize	1,445	14,733	43,740	58,432
7	Publix	749	14,528	31,649	81,829
8	Winn-Dixie	1,058	12,646	43,612	72,729
9	Supervalu	582	8,198	20,187	30,603
10	Great A&P Tea	488	7,832	16,968	30,280
11	H.E. Butt	284	7,744	11,323	34,180
12	Meijer	156	6,053	9,453	65,929
19	Raley's	134	2,675	6,258	8,897
20	Wegmans	64	2,491	4,979	12,647
21	Whole Foods	143	2,454	2,371	15,362
22	Kmart	115	2,443	5,658	41,607
24	Stater Bros	156	2,206	4,484	6,005
27	Target	102	2,018	6,144	25,001
35	Smart & Final	228	1,693	3,659	2,889
41	Winco	38	1,127	2,176	3,597

Source: *Progressive Grocer*, America's 50 Largest Supermarket Chains (Weir 2003).

Investigating these data in more detail shows great deal of variation among these grocers in the per-store and per-employee ratios (Table 5). The supercenter chains bring in more revenue than the stores with smaller square footage per store, and they employ substantially more employees per square foot.

The latter phenomenon may be a result of using employees for fewer hours per month. Part-time workers are reported as half time, but the average may be less. Meanwhile, the definition of "full-time" workers varies from company to company. Until recently, working 28 hours per week at Wal-Mart was sufficient for full-time status; that has since changed to 34 hours per week.⁵

The per-square foot revenue in the supercenters is also higher than the average for Wal-Mart and Meijer, but lower than average for Kmart and Target. In all cases, the revenue per employee tends to be quite a bit lower than the other major chains.

⁵ Both Johnson (2002) and Drogin (2003) state that Wal-Mart defines full-time status as at least 28 hours per week, but more recent Wal-Mart employee benefit information states that full-time work is 34 hours per week or more.

Table 5: Top grocers, 2003 - ratio calculations

Rank	Chain	Revenue per Store (Millions)	Selling Square Feet per Store	Revenue per Square Foot	Rev per FTE (1,000s)	FTEs per Store	per 1,000 Square Feet
1	Wal-Mart	36.48	61,457	\$594	\$114	320	5.21
2	Kroger	18.04	39,732	\$454	\$228	79	1.99
3	Safeway	18.57	36,547	\$508	\$273	68	1.86
4	Albertsons	17.91	46,481	\$385	\$224	80	1.72
5	Ahold	19.69	38,745	\$508	\$255	77	2.00
6	Delhaize	10.20	30,270	\$337	\$252	40	1.34
7	Publix	19.40	42,255	\$459	\$178	109	2.59
8	Winn-Dixie	11.95	41,221	\$290	\$174	69	1.67
9	Supervalu	14.09	34,686	\$406	\$268	53	1.52
10	Tea	16.05	34,770	\$462	\$259	62	1.78
11	H.E. Butt	27.27	39,870	\$684	\$227	120	3.02
12	Meijer	38.80	60,596	\$640	\$92	423	6.97
19	Raley's	19.96	46,701	\$427	\$301	66	1.42
20	Wegmans	38.92	77,797	\$500	\$197	198	2.54
21	Whole Foods	17.16	16,580	\$1,035	\$160	107	6.48
22	Kmart	21.24	49,200	\$432	\$59	362	7.35
24	Stater Bros	14.14	28,744	\$492	\$367	38	1.34
27	Target	19.78	60,235	\$328	\$81	245	4.07
35	Smart & Final	7.43	16,048	\$463	\$586	13	0.79
41	Winco	29.66	57,263	\$518	\$313	95	1.65

Source: Calculations based on Weir (2003).

Current conditions and projected growth

Of the five major players in the supercenter industry, Wal-Mart, Meijer, Fred Meyer (Kroger), Target, and Kmart, Wal-Mart has set the industry standard for supercenter growth. Target is a relative newcomer to the supercenter format, while Kmart's recent troubles, including its bankruptcy, have forced it to scale back its plans for future supercenters. Both Meijer and Fred Meyer have a significant number of supercenters—more, in fact, than Target or Kmart—but for the purposes of this report they are relatively less important, as neither chain is seen as likely to expand into California in the near future.

This report focuses on the firms with an active presence in California—Wal-Mart, Target and Kmart. Table 6 shows the time trend of supercenters operated by each company in the United States since 1991.

Table 6: Supercenter industry growth trends by company

	1991	1992	1993	1994	1995	1996
Wal-Mart	10	34	72	147	239	344
Target	0	0	0	0	2	8
Kmart	1	5	19	67	87	96
	1997	1998	1999	2000	2001	2002
Wal-Mart	441	564	721	888	1,066	1,258
Target	13	14	16	30	62	94
Kmart	99	102	105	104	123	114

Sources: Merrill Lynch (2003); Wal-Mart, Target and Kmart Annual Reports.

Of the companies in Table 6, Wal-Mart is far and away the largest operator of supercenters.⁶ In 2002 it opened 192 new supercenters, giving it a total of 1,258 nationwide—fully 70 percent of the country’s supercenters (Wal-Mart Annual report 2003; Barry 2003). These stores accounted for about 78 percent of the total supercenter industry sales in 2002, up from 72 percent in 2001 (Agnee 2003; Barry 2003). Target has 94 supercenters, but a fast growth rate: between 1999 and 2002 Target more than tripled its number of supercenters, and is expected to continue building them at a steady, if not as rapid, pace. Kmart has tumbled from the position it held in 2001: once operating 123 supercenters, it has since closed eight of them, and is projected to close over 50 more (Barry 2003), essentially removing it from future competition in the supercenter arena.

One inference from Table 6 is that the national retail trend toward supercenters has not yet reached California. Table 7, which shows Wal-Mart’s presence across discount store, supercenter, Sam’s Club, and Neighborhood Market formats in Texas, California, and the United States, illustrates that Wal-Mart’s current presence in the California market is not consistent with the company’s strategy of growing through supercenters. While Supercenters are still outside of the experience of most Californians and most Bay Area shoppers, national trends suggest that will change soon.

Table 7: Wal-Mart store counts in selected markets, 2003

	Discount Store	Supercenter	SAM's Club	Neighborhood Market
California	133	0	3	0
Texas	117	155	68	24
United States	1568	1258	525	49

Source: Wal-Mart Annual Report 2003

⁶ The second and third largest supercenter firms, Meijer and Fred Meyer, have 160 and 133 supercenters, respectively. Those firms are not shown in Table 6, as Meijer and Fred Meyer are regional firms that are not expected to expand into the Bay Area in the near future.

Nationally, Wal-Mart is expected to open 210 new supercenters in 2003, with about 130 of these slated to be conversions of existing retail discount stores (Barry 2003; Wal-Mart Annual Report 2003). At the end of January 2003, Wal-Mart had supercenters in all but seven states. It currently operates 133 discount stores in California, any number of which might be candidates for supercenter conversion (Wal-Mart Annual Report 2003). The cost of each such conversion is estimated at \$5.9 million: a conventional discount store is an \$8.8 million capital investment, while a supercenter costs approximately \$14.7 million (Barry 2003). The upgrade seems to be well worth its cost. The return on investment (ROI) for a Wal-Mart Supercenter is approximately 33 percent; by way of comparison, the ROI for a discount store is roughly 29 percent, and for the average American supermarket it is in the low 20 percent range (Barry 2003).

Over the last five years, supercenters in general have been the fastest-growing sector of retail, with sales growing at 29 percent; Wal-Mart's have been growing at a compound annual growth rate of 45 percent since 1993 (Barry 2003). According to Merrill Lynch, supercenters have accounted for 80 percent (\$5 billion) of Wal-Mart's \$6.4 billion in operating profit over the last five years (Barry 2003).

Implications for the grocery industry

The supercenter sector of the grocery industry is expected to keep growing at a steady pace, as there is considerable room in the domestic market for expansion. Wal-Mart may be able to more than double the number of supercenters to 2,700 stores and still remain profitable (Barry 2003). Supercenters are expected to propel Wal-Mart to double-digit growth through 2009. Currently Wal-Mart Supercenters own about seven percent of the total US grocery market, but by 2009 that share is projected to be 16 percent. In the same period, the share of traditional supermarkets in the grocery sector is expected to decline, from 86 percent today to 74 percent in 2009. The Merrill Lynch report anticipates that most of this decline will be borne by smaller, independent grocers (Agnee 2002).

That last point is important, because Wal-Mart, for all its market power, is still very much a southern and rural company. As of June 2003, over 70 percent of its supercenters were located outside the largest 100 metropolitan statistical areas, where almost 70 percent of the nation's grocery dollars are spent. By one estimate, in the top 26 markets with populations over 2 million, Wal-Mart's combined average market share is less than 4 percent (Tatge 2003). However, the development of the supercenter is following the same successful pattern of growth as Wal-Mart's discount retail stores. Supercenters already dominate the smaller markets of loyal Wal-Mart shoppers in southern and rural communities. If the historical pattern of Wal-Mart's expansion continues, Wal-Mart will build from this foundation by rapidly expanding its supercenter operations into markets outside of its traditional strongholds, penetrating metropolitan areas such as the Bay Area. Many grocery industry analysts view Wal-Mart as a formidable contender in the grocery market (Hays 2003; Business and Industry MMR 2003; Callahan and Zimmerman 2003).

Supermarkets are reacting to the new pressures of competition in a number of ways. Some chains are focusing on maintaining market share, rather than expanding. Albertson's, for example, has closed a number of stores, including all of its stores in Houston, and has announced plans to leave four other major markets (Albertson's Annual Report 2002, Standard and Poor's 2002). Some supermarkets are using preferred-shopper programs more (for instance, the Vons Club), as

they build customer loyalty and can help prevent flight to other stores. Private label merchandise offer customers savings of 20 to 40 percent when compared to national brands, and also give retailers a 35-40 percent margin, in contrast to the 27 percent average margin they receive on national brands (Agnee 2002). These are likely to be emphasized more in the future.

A number of large supermarket chains have chosen to offer more high-end goods and services, and to stress their connections to local communities. In metropolitan areas like Dallas, where Wal-Mart has established a strong presence, one Kroger's now serves stir-fry meals to go, while another has put together a 2,500 bottle wine collection and hired a full-time steward (Hays 2003).⁷ Conventional supermarkets may also have an advantage in neatness. A recent Wall Street Journal article states that 100,000 people visit an average supercenter each week, and the shelves and displays rapidly get messy and disorganized as a result (Callahan and Zimmerman 2003).⁸ Supercenters can be difficult to navigate, and merchandise can be hard to find. In this arena the smaller traditional supermarkets may maintain an advantage.

Wholesale clubs and "Neighborhood Markets"

Even as the supercenter moves to the center of the picture in the grocery sector, two other competitors deserve a mention. The first are warehouse clubs, of which the largest are Costco and the Wal-Mart-owned Sam's Club. Warehouse clubs are oriented primarily to business customers and other organizations that need to buy in bulk, but they are also popular with individual consumers. They currently account for about five percent of supermarket item sales in the United States, and are expected to increase that share, with some projections putting them at eight percent by 2009 (Barry 2003).

A wild card in the future of the grocery sector is Wal-Mart's "Neighborhood Market" format, which is currently in an experimental phase. Generally 42,000 to 55,000 square feet, neighborhood markets are comparable to existing combination grocery stores and drugstores. They are generally located in the same area as supercenters, so as to take advantage of the company's existing distribution network. A neighborhood market employs the same low wage labor and enjoys the same economies of scale as a supercenter Wal-Mart, but does so absent the daunting physical size. The first Neighborhood Market opened in 1998, and at the end of fiscal year 2003 there were 49 in existence. Almost half of these are in Texas (Wal-Mart Annual Report 2003).

⁷ The strategies adopted by the grocery stores in response to Wal-Mart's entry into the food sector contrast with those adopted by Circuit City and Best Buy in response to Wal-Mart's similarly forceful entry into electronics. Like groceries, electronics have small margins that vanish quickly, because the product cycle is so fast that inventory rapidly becomes obsolete. Last year Wal-Mart moved past Circuit City to become the second-largest electronics retailer in America, just behind Best Buy, and the reactions of the two electronics stores are instructive. Best Buy has decided to go even further upscale, by emphasizing high service levels, promoting its cutting-edge products more aggressively, and collaborating with homebuilders to wire extensive entertainment systems in new homes. Circuit City, by contrast, has fired its commission-based sales staff and replaced it with hourly employees (Hansell 2003).

⁸ In chapter 5, this report uses available data to develop a more conservative estimate of 23,205 persons per supercenter per week to derive traffic impacts. Note that if, in fact, supercenter customer visits are closer to the Wall Street Journal figure of 100,000 (Callahan and Zimmerman, 2003), which cannot be confirmed, then Chapter 5 substantially underestimates those traffic impacts.

In combination with supercenter saturation, Wal-Mart's Neighborhood Market format could substantially increase the threat to traditional supermarkets and small independent grocers. A Neighborhood Market can be expected to compete in a much smaller geographic area, and thus influence one or two local supermarkets more directly than a supercenter. Chuck Gilmer, editor of the trade journal *Shelby Report*, has said that Neighborhood Markets are where "Wal-Mart is really going to apply the pain"(Hassell 2001).

It is premature to say what the impact of Neighborhood Markets will be. Some Wal-Mart Supercenters lack head-to-head competition with stores of a similar format, but Neighborhood Markets must compete with existing and experienced local grocery chains. In May 2003, Wal-Mart announced that during the remainder of the fiscal year it would open fewer stores (15-20) than planned (20-25) in this format, perhaps because it has been less successful than anticipated.⁹

⁹ Wal-Mart to slow neighborhood market growth. *Supermarket News*, May 14, 2003.

Chapter 2: Supercenters in the Bay Area: Market Share Scenarios

The purpose of this chapter is twofold. First, it discusses existing big-box retail locations in the Bay Area, and how that informs likely locations of future supercenters. This is followed by estimates of future supercenter market share in the Bay Area study region. The market share projections provide the basis for consistently comparing lower consumer prices, wage and benefit reductions, and traffic impacts in later sections of this report.

The study area and existing big box retail locations

The report focuses on a twelve-county area consisting of the eleven counties included in the San Jose-San Francisco-Oakland Consolidated Statistical Area, as defined by the US Office of Management and Budget in June 2003, with the addition of Monterey County to the south (see Figure 2).¹⁰

Statewide, Target had 175 stores while Wal-Mart had 133 discount stores and 30 wholesale clubs at the end of 2002 (Wal-Mart 2003, Target 2002). None were supercenters, although most do sell some food and other items typical of grocery stores.¹¹ In the Bay Area, there were 32 Target stores, 27 Kmart stores and 19 Wal-Mart stores.¹²

As described in Chapter 1, most supercenters are redevelopments of existing big box discount retail stores. Whether existing sites can be used for expansion will depend on the particular characteristics of those sites, particularly the size of the parcel and whether contiguous parcels are available for purchase. This report did not inventory sites to check which could easily be expanded, and which would have to be closed in favor of other sites. However, the constraints on development are likely to be lowest where existing outlets are concentrated. Figure 3 in turn shows the number of so-called "big box" establishments by zip code for the study area. Locations of five big box store chains are aggregated: Costco, Sam's Club, Wal-Mart, Target, and Kmart.

¹⁰ The San Jose-San Francisco-Oakland, CA Combined Statistical Area (June, 2003 definition) consists of the Napa, CA Metropolitan Statistical Area (Napa County), the San Francisco-Oakland-Fremont, CA Metropolitan Statistical Area (San Francisco, Marin, San Mateo, Alameda, and Contra Costa Counties), the San Jose-Sunnyvale-Santa Clara, CA Metropolitan Statistical Area (Santa Clara and San Benito Counties), the Santa Cruz-Watsonville, CA Metropolitan Statistical Area (Santa Cruz County), the Santa Rosa-Petaluma, CA Metropolitan Statistical Area (Sonoma County), and the Vallejo-Fairfield, CA Metropolitan Statistical Area (Solano County).

¹¹ One industry source suggested that as much as 10 percent of revenue in a conventional Wal-Mart discount store could be from food sales.

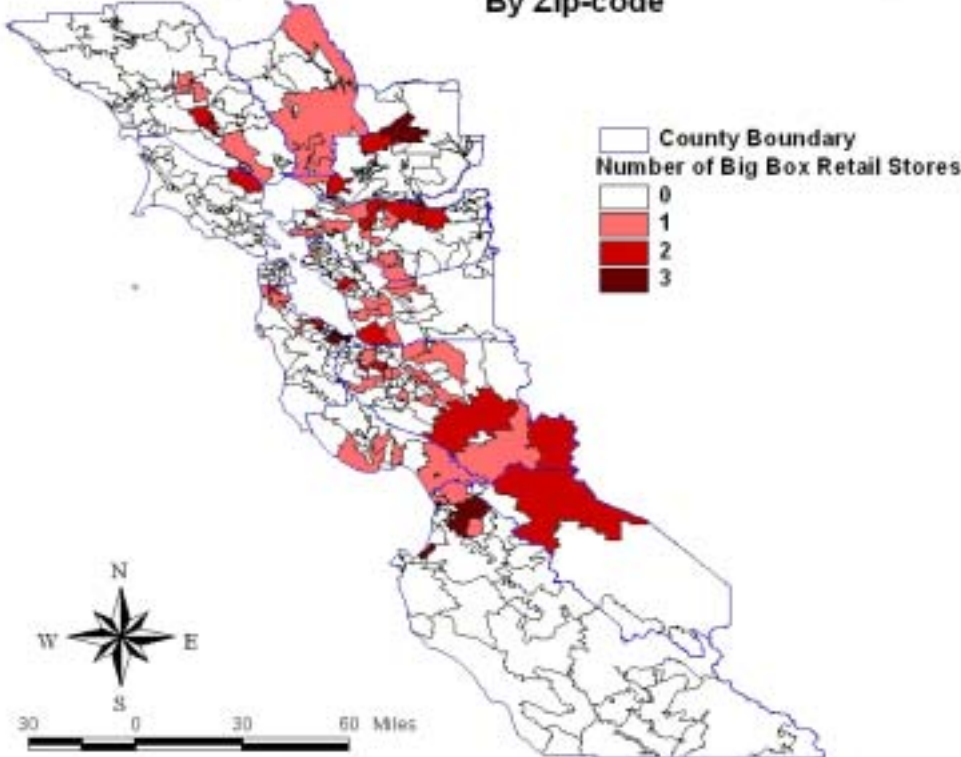
¹² Information on store locations was obtained from telephone directories and company websites.

Figure 2: Study area counties



Figure 3: Big box retail stores in study area, 2003

**Big Box Retail Stores in Northern California Region
By Zip-code**



Despite the relatively large number of Target stores in the Bay Area, Wal-Mart Supercenters appear to be the likely entrants in the short term. It has been reported that Wal-Mart has plans to open 40 supercenters in California by as early as 2006 (Adamy 2002; Grant 2002). Wal-Mart may also roll out neighborhood markets in California (Green 2003). Target stated recently that it had no immediate plans to open supercenters in California (Green 2003). Given Kmart's financial condition, it is unlikely to open new supercenters (Weir 2003).

The planning commission in Redding, California recently approved a Wal-Mart supercenter. The proposed development would add 93,000 square feet to an existing Wal-Mart discount store, expanding it to 220,000 square feet, including 60,000 square feet of grocery space (Mobley 2003). The Greenbelt Alliance (2003) reports that a Wal-Mart supercenter has been proposed in Gilroy. Sites in Salinas, Oakland, Brentwood, and other Bay Area locales have also been pursued by Wal-Mart for potential supercenter development. Other sources suggest that Wal-Mart Supercenters will likely open first in La Quinta, followed by the Redding store and stores in Hanford, Chico, and Bakersfield (Associated Press 2003).

It is difficult to predict a particular number or geographical pattern of supercenters. Based on the experience in other markets, as well as Wal-Mart's efforts to identify supercenter sites in outlying portions of urban areas, the company's initial foray into supercenters in California would likely concentrate on existing discount store locations and greenfields on the outskirts of the metropolitan areas.

Although Wal-Mart typically develops its stores in areas outside core urban areas, there are occasional exceptions. In January 2003 the company developed a large discount store in Los Angeles. The store, which does not sell groceries, is multistoried, uses an existing building rather than a new box, and has escalators that can accommodate shopping carts—a significant departure from Wal-Mart's typical format (Useem 2003).

Projected Bay Area supercenter market share

Data from several sources is used to estimate possible future market shares for Wal-Mart supercenters in the Bay Area study region. The analysis focuses on Wal-Mart because the firm is the most likely initial entrant into the Bay Area market. Estimating the future market share for supercenters is important in understanding the magnitude of the consumer price benefits, wage impacts, and land use and traffic effects discussed later in this report. A rough outline of the market share calculation is given below. For a more complete discussion of the supporting data and the methods, see Appendix A.

Estimating supercenter market share is complicated by the fact that the format is quite new. It is possible that no market in the United States has yet been saturated with supercenters, even though Wal-Mart supercenters have rapidly gained market share in most cities. In 1997, Wal-Mart operated eight supercenters in Dallas, with a 4.85% share; by 2003, Wal-Mart had 28 supercenters and an 18.3% share. In Houston, Wal-Mart had two supercenters and 1.04% market share in 1997, and by 2003 had increased its presence to 25 supercenters with a 16.69% share (Shelby Report).

This report discusses supercenter market share for the Bay Area for the year 2010, since that corresponds to the roughly seven-year span of data available for existing metropolitan markets. It does not project changes in market share for later years.

Market share is estimated in the following steps:

1. Local population growth projections are combined with existing grocery market data to estimate the Bay Area grocery market in 2010.
2. Data on Wal-Mart supercenter market share in large metropolitan areas (Dallas, Houston, Kansas City, Denver, and Phoenix) are used to calculate the revenue per supercenter and the Wal-Mart supercenter market share in those markets. These markets are chosen because they have a large number of supercenters, are similar in size to the San Francisco CMSA, and data are readily available.
3. Information on existing discount stores is used to infer the likely number of supercenters that could be opened in the Bay Area, based on the fact that conversions of existing discount stores is the most common method of opening a supercenter.
4. Estimates of the likely number of Bay Area supercenters in the year 2010 are combined with data on the revenue per supercenter and the size of the overall market give estimates of supercenter market share.
5. Supercenter market share is also compared to existing market share in other metropolitan areas.

This approach yields several market share scenarios for the year 2010, summarized in Table 8 (below).

Table 8: Market share scenarios, Wal-Mart supercenters, 2010

Assumptions:

Market revenue, 2003, \$ billions	\$9.7
Market revenue, 2010, \$ billions	10.4

Store Development Scenarios (Existing Cities)

	Stores	Rev/Store (\$ millions)	Revenue (\$ millions)	Market Share
Phoenix 2003	11	\$48	\$525	5.1%
Houston 2003	25	\$41	\$1,018	9.8%
Dallas 2003	28	\$38	\$1,061	10.2%

Market Share Scenarios (Existing Cities)

	Market Share	Revenue (\$ millions)	Rev/Store (\$ millions)	Stores
Denver 2003	6.75	\$702	\$37	19
Dallas 2003	18.3	\$1,903	\$38	50

Further 2010 Scenarios, Store Basis, Author's Estimates

	Stores	Rev/Store (\$ millions)	Revenue (\$ millions)	Market Share
Scenario 1	10	\$37	\$370	4%
Scenario 2	16	\$40	\$640	6%
Scenario 3	26	\$40	\$1,040	10%
Scenario 4	41	\$48	\$1,968	18%

Source: Market Share estimates from Shelby Report and Trade Dimensions, and authors' calculations. For more details, see Appendix A.

The scenarios are grouped in three categories. The first category—"Store Development Scenarios (Existing Cities)"—shows projected supercenter market share in the Bay Area using assumptions about the number of stores and revenues per store based on Phoenix, Houston, and Dallas in 2003.

The second category—"Market Share Scenarios"—is the number of stores that would have to be developed to capture market share equivalent to the Denver or Dallas supercenter market share in 2003. In both categories, the column on the right-hand side is calculated based on the data to the left.

The third category in Table 8 ("Further 2010 Scenarios") consists of four scenarios illustrating the range of possible future market shares in the Bay Area under assumptions specific to the Bay Area. If Wal-Mart were to replace all of its 16 discount stores with supercenters, at per-supercenter food revenue of \$40 million, the supercenter market share in the Bay Area in 2010 would be about 6 percent of the retail food market (Scenario 2). The upper bound is harder to estimate. Since supercenter saturation has yet to occur in most US cities, the case studies are of limited predictive value. The current distribution of big box retailers of all kinds in the Bay Area is used as a guide (see Figure 3, above). Including Costco, Sam's Club, Target, Wal-Mart, and

Kmart, there are about one hundred such locations in the 12-county study area. If Wal-Mart were to replace or upgrade all of its discount stores and also acquire Kmart's locations and replace or upgrade those into supercenters with per-store grocery revenue of \$48 million, this would yield a market share closer to 18 percent (41 stores). Market shares of 6 percent and 18 percent are within the range in other metropolitan areas, as shown in the first two categories of Table 8. For details on the market share calculation and supporting data, see Appendix A.¹³

Supercenters will capture market share unevenly by county, because they are likely to be developed first in areas with less expensive land and fewer controls on the development process. San Benito and Monterey, southern Santa Clara, northern Contra Costa, Solano and Napa, and eastern Alameda are the most likely areas for supercenter development.

The next section of the report, which includes Chapters 3 and 4, uses these market share projections to estimate a range of consumer price and employee wage impacts of supercenter entry into the Bay Area by 2010.

¹³ The data in the top half of Table 8 show that supercenter revenue per store drops in markets where Wal-Mart has more supercenters. The scenarios at the bottom of Table 8, because they are intended to illustrate ranges, combine low numbers of stores and low revenue per store (Scenario 1) and high numbers of stores and high revenue per store (Scenario 4), all based on observed experiences in other markets. Note that, in the 18% market share scenario, experience in other markets suggests that revenue per store will be lower than \$48 million, so that scenario might be associated with more than 41 supercenters in the Bay Area in the year 2010. Based on experiences in other markets, the authors judge the likely range of supercenter market share in the Bay Area, in the year 2010, to be from 6% to 18%, and those market shares are used in calculations in the rest of this report.

SECTION II: Price and Wage Impacts

Chapter 3: Consumer Benefits

For consumers, the most obvious advantage of supercenters is the broad variety of goods available at lower prices on average. Consumers also benefit from supercenters by being able to carry out one-stop shopping, reducing the need for separate trips to buy groceries and other products. This section is restricted to a discussion of the benefits supercenters offer, how they are able to offer them, and the particular implications for Bay Area consumers. *This report estimates the net reduction in consumer expenditures on groceries will range between \$382 million and \$1.13 billion per year in the study area.*

(There may also be additional consumer costs due to supercenter shopping. For example, consumers will normally have to drive farther. These are discussed in Chapter 5.)

Benefits of supercenter discount prices

How much money will Bay Area consumers save if supercenters open there in significant numbers? For purposes of illustration, this analysis assumes that Bay Area grocery stores, supermarkets, and supercenters will sell \$10.4 billion worth of grocery items in 2010, based on a straight-line relationship between population and revenues (see Chapter 2). Consumer benefits of the lower prices offered at supercenters depend on three interrelated factors: the average prices of grocery items at supercenters; their effect on prices at other supermarkets and grocery stores; and the share of the market that supercenters capture.

Average prices of grocery items

A 2002 study by UBS Warburg found that the price of a market basket of grocery items at Wal-Mart supercenters was between 17 and 29 percent lower than prices at major supermarket chains in the same urban area (Turcotte 2003). On average, the UBS Warburg study found that Wal-Mart grocery prices were 20 percent lower than major chains (Koretz 2002). Callahan and Zimmerman (2003) assert that average Wal-Mart prices were 10 or 15 percent lower when entering new markets, and cite unspecified “studies” showing differences in individual items ranging between 8 and 27 percent. A report by McKinsey & Company, apparently using proprietary survey data, states that conventional grocery stores have prices “over 8 percent [higher] across the board in some markets” in comparison to “value formats” such as supercenters (Frank et al 2003).

The range implied by these sources is from 8 to 20 percent for the price of the average market basket, an assumption reflected in the calculations below.¹⁴

Effect on prices in other stores

The UBS Warburg study is cited as finding an average reduction of 12 percent (Turcotte 2003) or 13 percent (Koretz 2002; Lofton 2003) in prices at other stores in the market after entry by Wal-Mart supercenters. Therefore 13 percent is used as an upper bound estimate of price reductions at other stores, corresponding to the 20 percent initial difference in price. Since the lower bound for the initial price difference is 8 percent, the corresponding decrease in prices among other stores for the lower-bound price difference scenario is set at 5 percent.

Market capture

Consistent with the previous analysis, the market capture of supercenters in 2010 is assumed to range between 6 and 18 percent (see Chapter 2).

Calculation of reduced expenditures

Using the range of assumptions above, the net reduction in consumer expenditures on groceries could range between \$382 million and \$1.13 billion per year in the study area, again omitting Sonoma County (Table 9).

Table 9: Estimated Consumer Grocery Expenditure Savings, by Market Share

Market Share	Supercenter Sector		Union Grocer Sector			Total
	Initial Price Difference	Reduced Expenditures (millions)	Market Share	Price Reduction	Reduced Expenditures (millions)	
6%	(8%)	(\$49.9)	64%	(5%)	(\$332.1)	(\$382.1)
6%	(20%)	(\$124.8)	64%	(13%)	(\$863.6)	(\$988.4)
10%	(8%)	(\$83.2)	61%	(5%)	(\$318.0)	(\$401.2)
10%	(20%)	(\$208.0)	61%	(13%)	(\$826.8)	(\$1,034.8)
18%	(8%)	(\$149.8)	56%	(5%)	(\$289.7)	(\$439.5)
18%	(20%)	(\$374.4)	56%	(13%)	(\$753.3)	(\$1,127.7)

Of the two sets of price differentials used to calculate consumer savings in the simulations above, the 20 percent price differential is based on data that reflect the initial difference between supercenters and grocery stores in markets where Wal-Mart supercenters had recently entered. The 8 percent price differential was based on studies that averaged across a range of markets, including markets where supercenters are more established. For that reason, the 8 percent price differential reflects some long-run response as grocery chains in some of the areas studied by McKinsey & Company had likely lowered their price in response to supercenter competition. Therefore, the 20 percent differential likely better reflects the price gap that would exist when

¹⁴ The upper and lower bounds are averages across market areas and across baskets of goods. Price differentials vary across items and across market areas.

supercenters initially enter a market, as would be the case in the early period of supercenter development in the Bay Area. Note also that the 20 percent price differential is an average of experiences across different markets studied by UBS Warburg (as cited in Koretz 2002 and Turcotte 2003), and so the calculations associated with that differential are not necessarily an upper bound.

These estimates assume no change in grocery prices in the non-unionized sector, for two reasons. First, supercenters are unlikely to saturate the Bay Area market, so price reductions are likely to be limited to stores in areas where supercenters are competing. Other parts of the region would not necessarily experience significant price reductions solely due to the arrival of the competition in the region. (However, regardless of saturation level, wage and benefit reductions will occur across the board in the union sector, because union bargaining agreements apply region-wide; this is discussed in Chapter 4.) The second reason is a simple exigency of data: independent grocers and small chains are typically in niche markets (for example, health foods or ethnic specialty foods), and reliable data about how prices in those smaller markets would respond to supercenters was not available.

These grocery savings have additional, indirect impacts on total regional consumption. Savings raise net incomes, which are then partly spent on more regional goods and services — which are in turn partly paid out as wages. Those are also partly spent on local goods, and so on, in a rippling effect. The total spending impact, or direct savings plus its indirect effect, is roughly estimated using a measure known as an income multiplier. While multiplier effects from lower prices are difficult to quantify, and estimates of local and regional income multipliers vary, the overall regional impact could be as much as two times the amount of direct expenditure savings (BAEF 2000).

Note, however, that to the extent that lower priced goods at supercenters require longer drives to access the stores there may be an increase in the time and money costs of travel associated with shopping there. This tradeoff is not captured in a calculation based solely on cost savings of goods. A calculation of the costs of extra driving is included in Chapter 5, which considers land use and transportation impacts.

Discount retail and productivity increases

Measures of productivity provide another way to assess the economic benefits of discount retail's expansion. Most economists conclude that productivity is the single most important factor in sustainable, long-term growth in standards of living (Krugman 1994).

Recent research suggests that the discount retail sector, and Wal-Mart in particular, is an important source of the late 1990s increase in productivity growth in the United States. The McKinsey Global Institute (MGI) studied productivity growth in the U.S. economy during two time periods, 1987 to 1995 and 1995 to 1999, to understand why growth rates were substantially faster between 1995 and 1999 (McKinsey Global Institute 2001). American labor productivity grew at an annual rate of 2.32 percent from 1995-1999, compared to 0.99 percent from 1987-1995, a jump of 1.33 percentage points.

The MGI study attributed about a quarter of this increase in the rate of productivity growth to improvements in the retail sector. Further decomposing this result, MGI attributed 16 percent of

the retail productivity increase to improvements in “general merchandise retailing” — the sub-sector composed largely of discount retailers. Within general merchandise retailing, MGI argued that the bulk of the productivity increase was attributable to Wal-Mart. In other words, MGI found that general merchandise retailing was responsible for 3.7 percent of the increase in U.S. productivity growth rates in the late 1990’s, and that Wal-Mart was essentially driving productivity increases in the general merchandise sector. This is a large impact for any one firm.

Articles in the popular press have noted that Wal-Mart’s productivity advantage is due to several factors: Efficient distribution systems, large scale economies that give it leverage in buying from suppliers, managerial innovations, and the big-box format which leads to within-store scale economies (McKinsey Global Institute 2001; Postrel 2002).¹⁵ Labor productivity levels in Wal-Mart stores were 44 percent higher than in other general merchandise retail stores in 1987. By 1999, it maintained a labor productivity level 41 percent higher than competitors (McKinsey Global Institute 2001).

Some economists have theorized that the lower prices available to consumers in the 1990s as a result of discount merchandising helped slow the rate of inflation. Some analysts have called this the “Wal-Mart effect,” noting the firm’s role in reducing prices throughout the discount retail sector (Baker, 1996). The MGI study estimated that labor productivity in Wal-Mart supercenters is 10 percent higher than labor productivity in the average discount retail outlet, suggesting that Wal-Mart supercenters are the most recent of various practices that have allowed that company to increase productivity and hence lower consumer prices.

The productivity advantages and consumer price benefits that flow from Wal-Mart’s efficiency innovations in the discount retail sector are important both for the U.S. and for regions. For the Bay Area, the entry of supercenters will bring lower grocery prices, providing increases in real living standards to consumers in the region. On the other hand, it will also lead to downward pressure on wages and benefits in the major Bay Area grocery chains, thus lowering living standards for grocery employees. This in turn will have a downward ripple effect on the regional economy. That point is the main subject of Chapter 4.

¹⁵ Also see “The Single Most Important Company,” *Newsweek*, April 29, 2002.

Chapter 4: Impacts on Regional and Local Grocery Industry Wages and Employment

The Bay Area grocery business is an important source of high-paying, entry-level employment. The grocery industry offers wage and benefits that generally exceed those in the retail, accommodation, and food and beverage industries. Among major categories of occupationally similar jobs examined in this research, only construction offers higher average pay and benefits than the grocery industry in the Bay Area, and the stability of construction work is likely lower.

Given the market share scenarios discussed in Chapter 2, what is the range of likely impacts of the entrance of supercenters into the grocery industry on employment and wages in the Bay Area? As shown below, the gap between wages and benefits paid by unionized grocers and those likely to be offered by the major supercenter player, Wal-Mart, is currently on the order of \$11.68 per hour, or about \$21,000 for an employee working 1,750 hours per year. As lower-paid jobs replace current and future higher-paid jobs in the major grocery chains, how much will aggregate worker pay be reduced?

The calculation depends on two key factors: the supercenter market share, which was discussed in Chapter 3, and the extent to which staffing levels per market share vary between the supercenter format and the conventional grocery format. *Under a set of realistic assumptions discussed in more detail below, aggregate direct wages and benefits to workers in the region would decline by \$353 to \$677 million per year.*

In addition, these direct losses have indirect consequences. Lower regional incomes mean less spending on other goods and services, and so on. That calculation relies on what is known as a wage multiplier, which is estimated by the regional planning agency, the Association of Bay Area Governments (ABAG). While estimates of wage multipliers vary, using the ABAG multiplier for retail wages in the Bay Area, the net economic reduction of wages and benefits would be more than twice the direct losses (ABAG 2003).¹⁶

The importance of the grocery industry in the Bay Area

In 2001, the most recent year for which Census data are available, there were 3.5 million full-time and part-time jobs in all non-proprietor establishments in the San Jose-San Francisco-Oakland Consolidated Metropolitan Statistical Area (Table 10). Adding Monterey and San Benito counties, the total was 3.6 million. The average pay and benefits per job in 2001 was about \$52,000, one of the highest for US metropolitan areas.

¹⁶ABAG's multipliers obtained from interview with Paul Fassinger, ABAG research director, 2003.

Table 10: Total employment, Bay Area, 2001

County	Employees	Annual Payroll (\$1,000)	Payroll per Employee	Establish- ments
Alameda	670,375	\$29,759,500	\$44,392	36,468
Contra Costa	329,686	14,402,442	43,685	22,285
Marin	109,012	4,540,570	41,652	10,256
Monterey	106,740	3,392,702	31,785	8,719
Napa	52,052	1,770,943	34,023	3,848
San Benito	11,263	306,023	27,171	1,025
San Francisco	557,049	31,409,218	56,385	30,643
San Mateo	382,377	22,404,842	58,594	20,378
Santa Clara	1,042,998	68,288,321	65,473	45,265
Santa Cruz	81,466	2,604,964	31,976	7,001
Solano	100,819	3,109,203	30,839	6,584
Sonoma	172,665	6,004,813	34,777	13,526
CMSA	3,498,499	\$184,294,816	\$52,678	196,254
12-county area	3,616,502	\$187,993,541	\$51,982	205,998

Source: U.S. Census Bureau

Tables 11 and 12 show employment and average payroll in grocery stores and supermarkets, excluding convenience stores.¹⁷ The grocery industry accounted for about 63,000 jobs in the study area and 58,000 jobs in the CMSA in 2001. This represents about two percent of employment for the study area, a substantial share for one industry. While the average wage for grocery jobs is significantly lower than the average for the study area, grocery employees are well paid compared to other occupationally similar sectors, as shown in Appendix B.

The employment and payroll figures in these tables are for all groceries and supermarkets. Small groceries and non-unionized supermarkets have lower wages and benefits than the unionized sector, so this average is lower than unionized supermarket jobs. Higher-paying and better-benefit union jobs account for about 60 percent of the employment in the industry.

The average payroll for grocery and supermarket employees was stable from 1998 to 2001, at about \$24,000 per employee. Meanwhile, the 236,000 workers in the food and drinking place industry brought in an average of \$13,400 per year in 2001, the 46,000 department store workers earned about \$14,000, and the accommodations (hotel and motel) industry paid its 57,000 employees close to \$19,000 per year. (See Appendix B for supporting data tables.) Among the industries in Appendix B, chosen because they provide employment opportunities that are similar to grocery jobs in terms of education and training requirements, only the 225,000 Bay Area construction workers received an average annual wage (\$43,000) higher than grocery workers.

¹⁷ "Payroll" includes wages, benefits, overtime pay, and bonuses. "Employees" includes all part-time and full-time individuals on the payroll at a given establishment on March 12. The NAICS system is site-specific, not firm specific. Therefore grocery industry employees working in distribution centers, administrative offices, and entirely retail stores are not included.

Table 11: Employment in the grocery industry, Bay Area, 1998 to 2001

	1998	1999	2000	2001	% of 12-County Region	% of ABAG Region
Alameda	9,789	9,942	9,822	10,619	16.7%	18.4%
Contra Costa	7,469	7,591	7,777	8,467	13.3%	14.7%
Marin	2,862	2,888	2,971	3,282	5.2%	5.7%
Monterey	2,362	2,748	2,787	2,716	4.3%	NA
Napa	1,221	1,251	1,254	1,439	2.3%	NA
San Benito	453	447	545	566	0.9%	1.0%
San Francisco	5,350	5,359	5,395	5,660	8.9%	9.8%
San Mateo	5,574	5,845	5,544	6,159	9.7%	10.7%
Santa Clara	12,974	13,126	12,597	13,405	21.1%	23.2%
Santa Cruz	2,207	2,339	2,247	2,422	3.8%	NA
Solano	2,908	2,843	2,814	3,299	5.2%	5.7%
Sonoma	4,751	5,107	4,775	5,458	8.6%	9.4%
12-county area	57,920	59,486	58,528	63,492		
CMSA	52,898	53,952	52,949	57,788		
State	232,910	250,811	239,654	250,300		

note: NAICS code 445110 - Supermarkets and Other Grocery (except Convenience) Stores (NAICS 1997 and 2002)

Source: County Business Patterns, US Department of Labor, Bureau of the Census

Table 12: Yearly payroll per employee in the grocery industry, Bay Area, 1998-2001

County	1998	1999	2000	2001
Alameda	\$24,281	\$22,996	\$26,333	\$24,590
Contra Costa	24,471	23,128	26,294	24,553
Marin	26,670	26,286	27,947	25,179
Monterey	26,414	24,714	24,095	24,118
Napa	24,334	24,197	25,496	23,523
San Benito	25,247	25,561	26,240	24,406
San Francisco	23,946	24,016	24,698	23,835
San Mateo	25,643	27,341	28,522	26,096
Santa Clara	24,897	25,655	26,686	24,925
Santa Cruz	24,504	23,302	24,070	22,497
Solano	26,030	25,648	24,964	24,449
Sonoma	23,868	22,039	24,388	22,374
Range	2,802	5,302	4,452	3,722
12-County Region	\$24,820	\$24,459	\$26,106	\$24,441
Statewide	24,399	24,230	24,807	23,785

Note: Inflated to 2001 dollars using the Consumer Price Index-Urban Wage Earners and Clerical Workers for the San Francisco-Oakland-San Jose Metropolitan Area (CPI series ID CWURA422SA0).

Note: NAICS code 445110 - Supermarkets and Other Grocery (except Convenience) Stores (NAICS 1997 and 2002).

Sources: County Business Patterns, US Department of Labor, Bureau of the Census; Consumer Price Index, US Department of Labor, Bureau of Labor Statistics.

Bay Area comparison of supermarket and supercenter wages and benefits

Table 13 compares the wages and benefits offered by unionized grocery stores in the Bay Area to those likely to be offered at Wal-Mart supercenters. The analysis focuses on unionized grocery stores because the unionized wage and benefit structure is largely consistent within the study area; about 60 percent of employment in the industry is unionized, and good data are available for this sector. This makes it possible to estimate wages and benefits with some accuracy. As noted previously, Wal-Mart supercenters are the basis for comparison because Wal-Mart is the most likely near-term supercenter entrant into the Bay Area market.

Unionized supermarket wages in the Bay Area

The unionized grocers have a largely consistent wage and benefit structure. Wages for the major categories of food workers and non-food workers are shown below for the past three years. Starting hourly wages for courtesy clerks are fairly low, at about \$8.40 per hour. However, rapid increases accrue with experience in all other wage categories (see Table 13, next page).

The average wage calculations are based on weighted averages within seven employment classes for about 36,000 unionized supermarket employees in the 12-county study area, excluding Sonoma County (see Table 14). The average hourly wage based on these figures is \$15.30.

Table 13: Wage schedule for food workers and non-food workers, UFCW Bay Area, 2001 to 2003

	July 2001	July 2002	July 2003
FOOD RATES			
Managing clerks	\$19.188	\$19.688	\$20.188
Senior head clerks and produce clerks	\$18.627	\$19.127	\$19.627
Head clerks	\$18.513	\$19.013	\$19.513
Experienced clerks	\$18.084	\$18.584	\$19.084
Apprentice clerks:			
4th 520 hours	\$13.841	\$14.224	\$14.607
3rd 520 hours	\$12.213	\$12.551	\$12.888
2nd 520 hours	\$10.585	\$10.877	\$11.170
1st 520 hours	\$8.957	\$9.204	\$9.452
Courtesy Clerks (Hired before 5/3/83)	\$8.812	\$9.112	\$9.412
Courtesy Clerks (Hired after 5/2/83)	\$7.795	\$8.095	\$8.395
Demonstrators	\$10.450	\$10.950	\$11.450
NON-FOOD RATES			
Combo Bakery/Deli Manager	\$13.605	\$14.105	\$14.605
Head Clerks	\$12.600	\$13.100	\$13.600
Experienced Clerks	\$12.205	\$12.705	\$13.205
Apprentice Clerks			
7th 520 hours	\$10.491	\$10.921	\$11.350
6th 520 hours	\$10.081	\$10.494	\$10.907
5th 520 hours	\$9.670	\$10.066	\$10.463
4th 520 hours	\$9.260	\$9.640	\$10.019
3rd 520 hours	\$8.759	\$9.118	\$9.477
2nd 520 hours			

Table 14: Average wages for unionized supermarket employees, 12-county study area, 2003

Group	Count	Percent of Total	Avg. Hrs/Yr	Wgt Av
Courtesy clerk	4,364	12.1%	961	\$8.40
Food clerk	17,394	48.3%	1,655	18.40
General merchandise clerk	9,963	27.7%	1,490	11.30
Meat cutter	2,076	5.8%	1,736	18.30
Meat clerk	645	1.8%	1,611	13.50
Meat wrapper	30	0.1%	1,718	13.90
Miscellaneous positions	1,521	4.2%	1,474	13.00
Total	35,993	100.0%	1,530	
Weighted average wage	\$15.30			

Sources: Employees by wage categorization reported by Union Automation, based on union records of the United Food and Commercial Workers (UFCW), Locals 428 (Santa Clara, Santa Cruz, Monterey, and San Benito Counties and Menlo Park), 373R (Napa and Solano Counties), 1179 (Contra Costa), 101 and 648 (San Francisco, Marin, San Mateo), 839 (Monterey, Santa Cruz and San Benito Counties), and 120 and 870 (Alameda County). Wage steps from the Master Food Agreement between the UFCW locals and major unionized supermarkets including Safeway, Albertson's, Ralph's, Nob Hill, and Raley's.

Supercenter wages

Detailed data on supercenter wages are generally unavailable. Anecdotal and journalistic evidence exists, but is of limited value; this evidence is reviewed below. Since Wal-Mart is the likely initial developer of supercenters in the Bay Area, this analysis relies on the best information possible on the wages and benefits Wal-Mart would likely offer to its supercenter employees, based upon a report using payroll records for 2001 that Wal-Mart turned over to plaintiffs in a sex discrimination class action lawsuit (Drogin 2003).

Supercenters accounted for 52 percent of total Wal-Mart employment in 2001, for over 460,000 employees (Drogin 2003). The percentage has likely increased since then, as most of Wal-Mart's double-digit revenue growth is attributable to the supercenter format. This analysis assumes that the national data available on Wal-Mart's wage structure and benefit packages are directly applicable to the supercenter format. Current evidence suggests that the wage structure within discount retail firms between stores with and without groceries is consistent (e.g., Bielby 2003). A hallmark of Wal-Mart's labor strategy is its worker flexibility, wherein any employee can be moved to any section of a given store at any time (Ortega 1998; Ehrenreich 2000; Wal-Mart Associate Handbook 2001; Cerankosky and Rodgers 2003). Segregating grocery and retail employees, and assigning them separate pay tracks, would be a significant departure from this strategy.

News reports and anecdotal sources suggest that whatever Wal-Mart pays in other parts of the US, it is less than \$10 per hour. Bob Ortega, a *Wall Street Journal* reporter who wrote a book about Wal-Mart in 1998, estimated the company's starting wages at between \$6 and \$7 per hour

(Ortega 1998; Ortega 1999). The journalist and social commentator Barbara Ehrenreich worked in a Wal-Mart for a month in 1999, and reported that starting wages in a Portland, Maine Wal-Mart were \$6.50 an hour, while the hourly wage in the Minneapolis-area Wal-Mart where she worked was \$7 (Ehrenreich 2000). The in-house publication of Ralph's supermarkets recently stated that Wal-Mart employees averaged \$7.62 while Ralph's employees average \$13.51.¹⁸

In June 2003, National Public Radio aired a multi-part series on Wal-Mart, and devoted one segment to the company's labor practices. In this segment NPR reported Wal-Mart wages as hovering between \$6.00 and \$7.00. A recent journalistic report stated that the average wage at Wal-Mart annually is less than \$10 an hour before bonuses (Saporito 2003), and an article in *Forbes* placed the average Wal-Mart wage at \$7.50 per hour, with the average annual salary of a full-time Wal-Mart employee being about \$18,000 a year (Hessell 2003). Using data on retail wages from the Bureau of Labor Statistics, the United Food and Commercial Workers (UFCW) union has estimated an average hourly wage of about \$7.50 based on the estimated percentage of overall retail employment accounted for by Wal-Mart.

These reported estimates are generally lower than the one used here. Drogin (2003) reports the average wage, at the end of 2001, of all "full time status" Wal-Mart employees—that is, employees who had worked at least 45 weeks during that year. Wal-Mart's definition of full time work is reported to be 28 hours a week or more (Johnson 2002; Drogin 2003).¹⁹ Table 15 shows that the percentage of employees falling in this category was 55 percent in 2000 and 2001.

About 57 percent of Wal-Mart employees had "full-time" status at the end of 2001 (Drogin 2003: 11). This implies that about 43 percent worked fewer than 45 weeks. (This high percentage is not due to the creation of new jobs, because it accounts for positions created in the previous year.) The implied high turnover rate is corroborated by the reported average tenure of four years for year-end, full-time employees (Drogin 2003: 19), which in turn is a very substantial overestimate of average tenure for all employees, because employee turnover during the year is not taken into account, and part-time workers are excluded. The real figure is probably less than three years. In comparison, the average tenure of unionized supermarket employees in the study area—including part-time workers—is more than nine years.²⁰

¹⁸ Ralph's Supermarkets. 2003. The Wal-Mart Strategy: Low Prices, Low Wages, Low Benefits. *Express Lanes*. 1(2). May.

¹⁹It has since increased to 34 hours per week, according to Wal-Mart benefits materials given to employees.

²⁰Based on data from the UFCW Employers Benefits Plans. The average number of pension vesting years (roughly equivalent to tenure in the current job) is 9.77. Some known employees provided by Union Automation are not part of the Trust Fund database and their pension vesting years are assumed to be lower.

Table 15: Wal-Mart full-time employment as percent of total, 1999-2001

Year	Wage Category	All Employees	45+ Weeks, 28+ Hrs/Week	As Percent of All	As Percent of Prev. Year End
2001	Total	930,770	508,724	55%	57%
	Hourly	895,809	476,813	53%	55%
	Salary	34,961	31,911	91%	98%
2000	Total	892,405	458,190	51%	57%
	Hourly	859,866	428,820	50%	55%
	Salary	32,539	29,370	90%	101%
1999	Total	810,722	414,989	51%	-
	Hourly	781,702	388,802	50%	-
	Salary	29,020	26,187	90%	-

Source: Drogin 2003, Appendix 4A (p.1) and 6A (p.1).

The nationwide average wage for Wal-Mart in 2001 was about \$18,000 for hourly employees with full time status and at least 45 weeks of work during the previous year. Salaried employees with full-time status and at least 45 weeks of work (e.g., management) earned about \$51,000 on average (Drogin 2003, Table 4).

Hourly employees made up 96 percent of total employees in 2001, and 94 percent of employees with full time status and at least 45 weeks of work. On an hourly basis, the wage averaged \$9.21 an hour in 2001 (Table 16). If wages at Wal-Mart have increased at the rate of inflation in the San Francisco urban area since then, the average wage for full-time workers with at least 45 weeks of work during the year would be about \$9.60 now. But this average calculated wage might be substantially less if the 341,797 employees without at least 45 weeks of work during the year (38 percent of the total worker pool) were accounted for. Unfortunately, data are not available on this group.

Table 16: Wal-Mart average hourly wage if employed at least one year & active at year-end, 2001

	Full Time	Part Time	Year-End Actives Not Accounted For
Men's average wage ¹	\$9.55	\$8.50	N/A
Women's average wage ¹	\$9.26	\$7.88	N/A
Women as share of workers	0.706	0.658	N/A
Average hourly wage, 2001	\$9.35	\$8.47	
Total workers	463,526	90,486	341,797
Percent of year-end actives	52%	10%	38%
Percent of universe	84%	16%	
Weighted average, 2001	\$9.21		
Inflated to April 2003 ²	\$9.60		

¹Average wage is calculated for active workers at year's end who had worked at Wal-Mart for at least one year (Drogin 2003).

²Using the Consumer Price Index-Urban Wage Earners and Clerical Workers for San Francisco-Oakland-San Jose.

Source: Drogin 2003, p. 11 and Appendix 8b; authors' calculations.

The estimated average hourly wage of \$9.60 is likely an overstatement of the national average wage, for three reasons. First, it does not count those who were hired during the year, even though such workers account for 38 percent of year-end active workers, as shown in Table 16, above. Thus, longer-tenured employees, who tend to have higher wages, are significantly over-represented.

Second, Wal-Mart reported that it had 1,239,409 employees in 2000, which includes all those who worked for a short while and left before the year was over.²¹ This implies about 300,000 employees turned over per year during this recent period. These employees are not included in the payroll records upon which the estimate is based, and such employees would be expected to have lower wages than those who were active at year-end.

Third, it is unlikely that the average wage has kept up with increases in the CPI for the San Francisco Bay Area during the last year and a half.

²¹ From IRS Form 5500 for Wal-Mart 401K Retirement Savings Plan, Schedule T (Qualified Pension Plan Coverage Information), 4c(1).

Despite the fact that \$9.60 is likely an overestimate of the current average wage for all hourly workers at Wal-Mart stores in the United States, it is used here because that estimated hourly wage is based on the best available evidence.²²

Benefits comparison

Benefits provided by the unionized grocery companies and Wal-Mart are summarized in Table 17 (below). Both the UFCW locals and Wal-Mart offer paid holidays, paid vacation, health benefits, sick leave, and a pension plan. In every category, the benefits offered to workers at the UFCW locals are more valuable than those offered by Wal-Mart. Information about some of the Wal-Mart benefits in Table 17 is from Boarnet and Crane (1999), and those Wal-Mart benefits, preceded by “[1999]” in the table, may have changed in the intervening four years.

Job tenure is crucial in understanding the value of these benefits in practice. The rapid expansion of Wal-Mart’s workforce means that on a nationwide basis there are many recently hired employees. Even if growth continues for Wal-Mart into the foreseeable future, the percentage of new positions added on a yearly basis will decline, which could lead to an increase in the average wage when longer-tenured employees receive promised increases in wages and benefits. However, as discussed in the text accompanying Table 15, Wal-Mart’s turnover rate is quite high. This largely explains why even with a non-trivial benefits package, the average value of benefits can be low on a per-employee basis.

The dollar value of the benefits packages is estimated in order to compare them more explicitly. UFCW monetized benefit estimates are based on reporting of disaggregate employee data by the union pension funds. This information is reported on a summary basis in Table 20, later in this chapter. The net benefits package is worth about \$7.57 per hour, excluding premiums (overtime, holiday, and Sunday pay).

²² The estimated national average Wal-Mart wage is used for the Bay Area. Note that, while the data in Drogin (2003) give some information on Wal-Mart wages in different regions, those data suggest that the national average Wal-Mart wage is a good estimate of Bay Area Wal-Mart wages. The region including northern California, Oregon, and rural Washington has an average wage equivalent to the national average, but that region includes both the urbanized Bay Area and rural areas to the north. The southern California administrative region is likely more dominated by urban areas, and in southern California Wal-Mart wages are 97 percent of the nationwide average. Among the Wal-Mart administrative regions analyzed in Drogin (2003, appendix 4c), the regions with the highest pay rates offered wages averaging 20 percent higher than the national average. Because none of those regions were in California, the estimated national average wage is used as an estimate of Bay Area supercenter wages in this study.

Table 17: Benefits comparison

	UFCW Locals, Bay Area	Wal-Mart, US
Paid Holidays:	Nine per year.	[1999] Six per year.
Vacations:	Two weeks after one year. Three weeks after five years. Four weeks after fifteen years. Five weeks after twenty years.	[1999]: One week after one year. Two weeks after two years. Three weeks after seven years
Premium pay:	150% for overtime and Sundays, 200% for holidays.	Unknown
Sick Leave:	Accrues at six hours per month, maximum 360 hours of unused sick leave. Annual cash buyout for unused hours up to \$400 less \$10 for each sick leave hour used	[1999]: Accrues at .023077 hours for each hour worked (approx. 4 hours per month) or 6 days per year, to a maximum of 192 hours (24 days). 50% of accrued sick leave may be used as personal time off from work. No cash buyout
Health & Welfare Eligibility	Those working a minimum of 64 or 72 hours per month, after the first two months (60 days) of service.	For those hired after 9/30/01, up to 180 days, 34 hours a week minimum.
Medical Insurance:	Three plans offered. Dependents covered under all plans. No premium. \$200 deductible per person per disability. Most common plan (66 percent of workers), 100 percent of outpatient, birthing, extended care, inpatient. \$10 copay for office visits, 100% coverage of remainder for PPO.	Employer paid with employee sharing premium. Two deductible options, \$350 or \$1,000. Employee premium ranges from \$338 to \$3,081 yearly depending on plan, deductible, and number of dependents.
Dental Insurance:	80% of standard services covered.	Unknown
Retirement Plan:	Pension and 401K both made available to employees after probationary period of 375 hours of service. No employee premium required	401K Plan: Any employee who worked one year for 1,000 hours. Money in trust until employee leaves or reaches age 69-1/2. Stock Ownership: Company contributes 15% towards up to \$1,800 of Wal-Mart stock each year.
Other:	Death benefit insurance averaging \$33,877 (source - UFCW EBF). Vision coverage with \$5 or \$10 copay for exam, lenses and frames covered	Profit-Sharing Plan: Same eligibility as for 401K.

Sources: The Segal Company; UFCW Employers Benefit Plans database; Wal-Mart Associate Handbook and miscellaneous benefits materials; Boarnet and Crane (1999).

On a monetized basis, the benefits received by Wal-Mart employees are substantially less than those of the unionized grocery stores in the Bay Area. In 1995, 38 percent of Wal-Mart employees

took advantage of the benefits packages offered to them by Wal-Mart (Boarnet and Crane 1999). That number increased to 46 percent in 2000.²³ The low participation rate is likely due to the high employee contributions required.

The average hourly employer’s contribution to health and welfare plans for participating Wal-Mart employees in 2000 was, at most, \$0.86 per hour (based on the most recent publicly available tax return information). When averaged across all employees, the net benefit falls to at most \$0.81 (Table 18).²⁴ This assumes, conservatively, that the 1.2 million Wal-Mart employees active at year-end 2001 averaged 750 hours that year. No data on average hours are available.

Table 18: Wal-Mart health and welfare benefits estimate, 2000

Number of employees and dependents covered in 2000 ^a	980,241 [A]
Number of employees in 2000 (year-end) ^b	1,239,409 [B]
Percent of employees covered in 2003 ^c	46% [C]
Total contributions to Associates Health & Welfare Plan, 2000 ^d	\$1,338,300,320
Contributions from employers (Wal-Mart) ^e	\$748,321,573 [D]
Contributions from participants (Wal-Mart employees) ^f	\$589,978,747 [E]
Estimates:	
Covered employees (B X C)	570,128 [F]
Covered dependents (A - F)	410,113
Employer contribution per covered employee (D / F)	\$1,313 [G]
Employee contribution per covered employee (E / F)	\$1,035
Avg. hours worked, covered employees (45 wks, 34 hrs/wk)	1,530 [H]
Employer contribution per hour for covered employees (G / H)	\$0.86
Employer contribution per employee (D / B)	\$604 [I]
Employee contribution per employee (E / B)	\$476
Avg. hours worked, all employees (equiv. to 30 wks, 25 hrs/wk)	750 [J]
Employer contribution per hour averaged over all employees (I / J)	\$0.81

^aIRS Form 5500 for Wal-Mart Associate Health and Welfare Plans, Part II (Basic Plan Information), Line 7d

^bIRS Form 5500 for Wal-Mart 401K Retirement Savings Plan, Schedule T (Qualified Pension Plan Coverage Information), 4c(1)

^cUFCW estimate

^dIRS Form 5500, Schedule H, Part II (Income and Expense Statement), Line 3

^eIRS Form 5500, Schedule H, Part II (Income and Expense Statement), Line 1A

^fIRS Form 5500, Schedule H, Part II (Income and Expense Statement), Line 1B

²³ Source: Interview with staff at the United Food and Commercial Workers. Figure reported to be based on IRS 5500 Schedule F information obtained through a Wal-Mart employee.

²⁴ Note that the calculated average hourly benefit does not rely on estimates of the percentage of employees participating in various plans, or on the details of those plans. Instead, the average hourly benefit is calculated by dividing employer contributions by estimated hours worked.

Similar calculations are carried out for Wal-Mart’s pension plan. The plan is worth \$0.22 per hour averaged across all employees (Table 19).

Table 19: Wal-Mart average per hour contribution to retirement savings plan, 2000

Number of employees and dependents covered in 2000 ^a	613,995	
Total employees ^b	1,239,409	[A]
Number of excludable employees ^c	581,054	
Number of nonexcludable employees ^d	658,355	
Number of benefitting nonexcludable employees ^e	556,522	[B]
Total Wal-Mart contributions to 401K retirement savings plan ^f	\$209,122,000	[C]
Total employee contributions to 401K retirement savings plan ^g	\$181,923,000	
Estimates:		
Avg. hours worked, covered employees (45 wks, 34 hrs/wk)	1,530	
Employer contribution per covered employee ([C] / [B])	\$376	
Employee contribution per total employees ([C] / [A])	\$169	[D]
Avg. hours worked, all employees (30 wks, 25 hrs/wk)	750	[E]
Employer contribution per hour averaged over all employees ([D] / [E])	\$0.22	

^aIRS Form 5500 for Wal-Mart 401K Retirement Savings Plan, Part II (Basic Plan Information), 2000, Line 7d

^bSchedule T (Qualified Pension Plan Coverage Information), 4c(1)

^cSchedule T, 4c(2)

^eSchedule T, 4c(5)

^fSchedule H, Part II (Income and Expense Statement), 2a(1)(A)

^gSchedule H, Part II (Income and Expense Statement), 2a(1)(B)

Comparison of wages and monetized benefits

Employees of the major unionized chains, making up about 60 percent of the labor force in the study area, have wages and benefits valued at \$23.64 per hour. The gap in the value of hourly wage and benefits between grocery workers at Wal-Mart and those at unionized supermarkets is estimated at \$11.68 per hour. This is 98 percent of the Wal-Mart base wage and benefits package, valued at \$11.95 per hour. See Table 20, below, for a side-by-side comparison of wages and benefits on an hourly basis.

Table 20: Comparison of estimated wages and benefits for unionized supermarkets in the Bay Area and Wal-Mart supercenters in the US

	Union grocers study area	Wal-Mart, U.S.
Average hourly wage, all workers	\$15.30 ^a	\$9.60 ^b
Health & welfare benefits per hour	4.57 ^c	0.81 ^d
Pension benefits per hour	1.35 ^e	0.22 ^f
Premium pay, per-hour basis	0.77 ^g	0.48 ^h
Vacation, per-hour basis	0.92 ⁱ	0.38 ^j
Sick leave, per-hour basis	0.73 ^k	0.46 ^l
Benefits package (excl. premium pay)	7.57	1.87
Total wages and benefits, per hour	\$23.64	\$11.95
Benefits/premiums, percent of base wage	35%	20%
Difference	\$11.68	
As percent of Wal-Mart hourly	98%	

^aFrom Table 14.

^bFrom Table 16.

^cMean employer contribution to health & welfare calculated by authors us UFCW Employers Benefit Plans database.

^dFrom Table 18.

^eMean employer contribution to pension fund and 401K calculated by autl using UFCW Employers Benefit Plans database.

^fFrom Table 19.

^gAssumes premium pay (overtime pay and additional pay for Sundays and holidays) constitutes an increment of 5 percent on the base wage, pendir information from Food Employers Council.

^hAssumed to be paid in same proportion to base wage as UFCW workers.

ⁱBased on 6 percent of hourly wage, treating a full-time employee with mc than five years of tenure as the average. Sources: UFCW Employer's Trust Funds for tenure estimate of 9.77 years; Master Food Agreement for the unionized supermarkets for vacation entitlement of three weeks.

^jBased on 4 percent of hourly wage, treating a full-time employee with thir four years of tenure as the average (Drogin 2003, Table 12) (entitled to weeks of vacation, according to Wal-Mart Associate Benefits Handbook, 1

^kBased on six hours times 12 months times base wage divided by average hours per year of 1,500.

^lAssumed to be paid in same proportion to base wage as UFCW workers.

Wage and benefits impact analysis

The supercenter is still a relatively new format, and supercenters in urban, unionized areas are still more so. There may be no documented example of a large city where Wal-Mart's presence has had a significant impact on the wage and salary negotiations between supermarkets and labor unions. (That said, the ongoing 2003 negotiations between the UFCW and major grocery chains in southern California might provide one.) However, a previous review of literature on the influences of non-union entrants on unionized supermarkets in Canada suggests that this will happen eventually. Unionized workers in Canada, who enjoyed wages and benefits 40 to 60 percent higher than workers in non-union competitors, were forced to accept a reduction in their wage and benefits as the non-union competitor gained market share (Boarnet and Crane 1999: 45-47). That experience suggests that grocery companies in the Bay Area will demand wage and benefit adjustments to close the gap with supercenters if they believe they will lose market share.

There are some indications that supercenter-driven negotiation pressure may already be beginning. According to the president of the Dallas union of meat, seafood and deli workers, the UFCW unions there have long set the wage levels in the industry despite their low share, but this will be under threat in the new negotiation in June 2004.²⁵ Similar information was obtained in interviews with local presidents and executive assistants from major unions in Las Vegas, Arizona, and Houston.²⁶ The well publicized grocery employee strike in southern California, still in progress at the time this report was written, occurred against a backdrop of concern that supercenters would soon enter that market.

The experience of other urban areas provided the following guidelines for the calculation of the impact of supercenters on grocery wages and benefits in the Bay Area:

In the short term after entry of the supercenters (about five years), assuming a moderate expansion of the market, any loss of market share to Wal-Mart will affect the average wage industry wide, but will not reduce the wage and benefit package of remaining union members by very much. This assumption accords with the experiences of unionized supermarkets in other cities.

In the longer term (8 to 15 years), if Wal-Mart gains significant market share there will be a reduction of wages and benefits similar to that which has taken place in Canadian markets; 40 to 60 percent of the difference between wages offered by Wal-Mart and those offered by the unionized supermarkets will be erased. If the current gap is \$11.68 per hour, for instance, grocery wage reductions could trim the difference to between \$4.67 and \$7 per hour. If Wal-Mart attains the upper range of the estimated range of market shares calculated in Chapter 2, the pressure on major grocery chains could be sufficient to lead to an 80 percent closure of the compensation gap between supercenters and unionized supermarkets. This is based on evidence, reported in Boarnet and Crane (1999), that in some of the Canadian markets major grocery chains believed that wage and benefit parity with non-union competitors was necessary in the long-run.

²⁵ Interview with Johnny Rodriguez, president of UFCW Local 540 in Dallas.

²⁶ Interviews with Roberta West and Michael Gittings, president and secretary-treasurer of UFCW Local 711 in Las Vegas; Jim McLaughlin, president of UFCW Local 99 in Phoenix; and Miles Anderson, executive assistant to the president, UFCW Local 455 in Houston.

The greater the market share that supercenters achieve, the more pressure will be put on supermarkets and independent grocers to limit wage and benefit increases and in instituting other rules to save labor costs in order to compete.

Table 21, below, gives varying assumptions about supercenter market share and the amount of the wage and benefit gap that is closed. Corresponding to the experience elsewhere, Table 21 shows long-run scenarios, estimated for the year 2010.

Table 21: Wage and benefits impact estimate, 2010

Assumptions	Current	2010 estimate
Market size (\$bil) ¹	\$9.7	\$10.4
Increase		7%
Union members, 2003	35,993	
Union as percent	62%	
Groc emps, 2001 (no Sonoma)	58,034	62,096
Union market share	68%	
Average hours per year	1,800	
Wage gap	\$11.68	

Supercenter market share, 2010	Wage gap closure	Employment		Reduced wages & benefits (\$millions)		
		Union	Non-union	Union workers	Union shrinkage	Total
0.06	40%	36,190	25,906	\$304	\$49	\$353
0.06	60%	36,190	25,906	\$457	\$49	\$506
0.10	40%	34,650	27,446	\$292	\$81	\$373
0.10	60%	34,650	27,446	\$437	\$81	\$518
0.18	40%	31,570	30,526	\$266	\$146	\$412
0.18	60%	31,570	30,526	\$398	\$146	\$544
0.18	80%	31,570	30,526	\$531	\$146	\$677

The calculations in the table above reflect the following logic and assumptions, which correspond to the columns at the bottom of the table, moving from left to right. Supercenters capture market share, based on the range of year 2010 market share estimates developed in Chapter 2. This results in downward pressure on wages and benefits in the unionized grocery sector. A fraction of the gap between grocery pay and benefits and supercenter pay and benefits is closed. That fraction is either 40 percent or 60 percent, based on the Canadian experience reported in Boarnet and Crane (1999) or, for the case of 18 percent supercenter market share, the table also shows the effect of closing 80 percent of the gap between grocery and supercenter compensation. Supercenters are assumed to displace employment in the union and non-union sectors of the grocery industry in proportion to the existing split of union and non-union employment in the industry in the Bay Area, and the resulting union and non-union grocery

industry employment is shown in the third and fourth columns from the left for each supercenter market share scenario.²⁷

Calculating reduced wages and benefits then involves two steps: (1) Some jobs that would have been union jobs are in the supercenter sector, where employees are compensated less (the column labeled “reduced wages and benefits, union shrinkage”)²⁸, and (2) The remaining grocery union jobs also pay less, due to the wage gap closures (the column labeled “reduced wages and benefits, union workers”)²⁹. The sum of those two impacts is the estimate of the reduced wages and benefits in the grocery sector due to the entry of supercenters into the Bay Area, shown on the far right column of Table 21. Any wages and benefits lost due to reductions in the non-union sector of the market are not estimated due to lack of specific data for that sector.

Under the assumptions in Table 21, the value of reduced wages and benefits can be expected to range between \$353 and \$677 million per year. As noted at the beginning of this chapter, using the ABAG multiplier for retail wages in the Bay Area of 2.18, the net economic reduction of wages and benefits would be in the range of \$770 million to \$1.48 billion per year.

²⁷ One reviewer suggested that supercenters, while paying lower wages, might employ more persons. The data in Table 5 (Chapter 1) give some insights. Wal-Mart employs approximately four times as many full-time equivalent (FTE) employees per store as the major national grocery chains, and Wal-Mart supercenters average approximately twice the revenue per store as a major supermarket. These ratios are similar for other supercenter chains (shown in bold in Table 5). This suggests that the FTE per revenue in supercenters is approximately double the FTE per revenue in major supermarkets, lending some support to the hypothesis that supercenters pay employees less, but hire more workers. Yet making strong inferences from the data in Table 5, which is from trade publications, is difficult. Note, for example, that low revenue will also increase FTE per revenue, and that ratio is especially high for K-Mart, but that could reflect K-Mart’s recent financial difficulties. More specifically, employment impacts of supercenters should be based on careful analysis of specific labor markets, which cannot be inferred from Table 5. Lacking more credible data on employment effects of supercenters, the wage and benefit impacts calculated here are derived by apportioning projected grocery sector employment according to projected supercenter market share.

²⁸ The number of supercenter jobs is multiplied by the wage gap to yield the estimates shown in “reduced wages and benefits, union shrinkage”.

²⁹ The number of union members is multiplied by the average hours worked per year (assumed to be 1,800 hours), by the wage gap, and by the percentage reduction in the wage gap due to downward pressure on wages from the supercenters, to yield the estimates shown in the column “reduced wages and benefits, union workers.”

SECTION III: Local Development Impacts

Chapter 5: Land Use and Traffic Impacts

One of the more common criticisms of big box discount retail is that it contributes to the decentralization of population, and thus either causes or accelerates the process of urban sprawl, leading to increased traffic, wasteful consumption of land, alienation of pedestrians, higher infrastructure costs, and other problems associated with the dispersal of residences and increased distances between homes and stores (e.g. Kunstler 1996; Holtz-Kay 1997; Duany, Plater-Zyberk and Speck 2000).

Those who criticize the development patterns associated with discount retail often advocate more compact, mixed-use development. Although some arguments for more compact urban form seem intuitive, the evidence is mixed. For example, although it is argued that “leapfrog” development (development that jumps from place to place rather than progressing steadily outward) is wasteful and leaves large pockets of land underused, later infill development in these areas may take place at much higher densities (Peiser 1989). There is likewise significant ambiguity surrounding the question of whether density and urban form have much impact on travel behavior (Lave 1994; Guiliano 1995; Crane 2000; Boarnet and Crane 2001), and the question of whether sprawl leads to higher infrastructure costs is unsettled (Altshuler and Gomez-Ibanez 1993; Calthorpe and Fulton 2001). Nevertheless, many Bay Area cities and counties have adopted general plan policies and goals that call for promoting higher density, infill, and/or transit-oriented development, as well as revitalizing pedestrian-friendly downtown and neighborhood shopping districts.

Within this larger set of issues, the question considered here is more narrow: What kinds of impacts will grocery/retail supercenters will have on land use, urban decentralization and traffic? This is different from asking whether discount retail in general helps disperse population and decentralize metropolitan areas. A number of urban historians (Jackson 1985; Fogelson 2002; Cohen 2003) agree that retail originally followed population out of the cities, and that it was residential, not commercial, development that led America’s first waves of suburbanization. Today, however, the picture is somewhat foggier. Retail development can be seen as both a source and a symptom of residential dispersal. Big box stores do their best to follow population growth—supply rarely creates its own demand—but the tendency of these stores to locate on fringes does push the development envelope. Particularly in instances where agricultural land is rezoned to permit retail uses, residential development is likely to follow.

Because the concern in this report lies specifically with supercenters, and because supercenters tend to be replacements of existing discount stores, the land use issues addressed here will be comparisons between supercenters and discount stores, and also between supercenters and traditional supermarkets, since the supercenters are expected to take some market share away from regular grocery stores. Does a supercenter generate more traffic than a grocery store? Does it use proportionally more land? Is it more likely to locate in peripheral areas?

To better orient this discussion, the chapter has three parts, addressing:

- The size and footprint of the supercenter,
- Questions of location and decentralization, and
- Traffic impacts.

In each part, a supercenter is compared to existing big-box discount retail stores or grocery stores, to focus on whether and how the supercenter format might change land use or traffic patterns in the Bay Area.

The analysis concludes that the impact of supercenters is likely to be due to their larger catchment areas, which could be associated with longer shopping trips and hence more vehicle miles of travel. In terms of land use footprint or issues of location or decentralization, it is less likely that supercenters will differ significantly from existing development patterns.

Size and footprint

One major reason big box stores tend to locate on the peripheries of urban areas is that they require a lot of land, and land is cheaper on the fringe than it is in the center. Wal-Mart supercenters range in size from 150,000 to 210,000 square feet, and are often surrounded by parking lots up to three times the size of the stores themselves. It is both expensive and logistically difficult to assemble a sufficiently sized parcel of land in the more developed parts of an urban area.

Nationwide, the average size of a Wal-Mart supercenter is 160,000 square feet, although the supercenters currently proposed or approved in California range from 180,000 to 220,000 square feet. The average supercenter's grocery area is 60,000 square feet, larger than the national average of 40,000 square feet for a conventional supermarket. However, grocery stores of 50,000 to 60,000 square feet are not unheard of. So how is a supercenter significantly different from having a large grocery store and a regular discount store adjacent to one another?

The evidence suggests that cities and towns regulate supercenters and supermarkets in the same way, particularly with regard to parking requirements, which tend to account for most of the land consumption in both kinds of development. A survey of off-street parking requirements in California and some out-of-state locations shows remarkable consistency: for grocery stores, discount retail stores, and supercenters, almost every city requires one parking space for every 200 square feet of floor area. A few cities require one space per 250 square feet, and almost none require more. Until 2000, the city of Seneca required one space per 100 square feet. Seneca changed its rules after being advised that they were "twice as stringent" as every other community in the state.

This point is further underscored by a survey of California cities with Wal-Mart discount stores, which found that Wal-Mart adhered to these parking requirements when it constructed its discount stores. The company neither requested a variance to build fewer parking spaces nor

decided of its own accord to build more.³⁰ A notable exception was Union City, California, where the Bay Area's first Wal-Mart discount store was built. Union City requires one parking space per 250 square feet of retail space. However, when Wal-Mart built its discount store there, the company chose to provide seven parking spaces for every 1,000 square feet. According to Union City planners, Wal-Mart officials said this was a standard company parking guideline, and that it was applied to all of the company's properties. As other examples of this parking ratio were not found, and because the Union City Wal-Mart was built 11 years ago, Wal-Mart may have since revised downward its estimates of needed parking. Most information available suggests Wal-Mart now provides only enough parking to meet municipal codes.

This information can be used to estimate the land area required for supercenter development, along with assumptions about landscaping and parking space size. The average size of an off-street parking space, including room for automobile circulation, is 337 square feet. Landscaping adds an additional 10 percent (applied to parking and building footprint combined). Given these baseline assumptions, the scenarios below (see next page) illustrate a range of possible sizes for Bay Area supercenters. Scenarios 1 and 2 represent the one space per 250 square feet and one space per 200 square feet parking requirements, respectively, while scenario 3 represents the high-end, older Wal-Mart ratio of one space per 143 square feet of floor area.

The purpose of these scenarios is not to offer precise predictions of how big a discount store or supercenter might be. Such an exercise is futile for a number of reasons. Parcel size does not dictate how big a supercenter will be, but is a function of what parcels are available. Variances, conditional use permits, and other locality-specific circumstances may modify development plans during the process of approving such large projects. There are also some common factors that may increase the required parcel size, such as company specifications for loading docks and truck parking areas, or more stringent landscaping, setback, or other municipal requirements. A proposed Wal-Mart supercenter in Gilroy would be 203,622 square feet, with 1,018 parking spaces and a total site footprint of 17.44 acres—five acres more than the “scenario 2” to which it corresponds.

The scenarios are intended to illustrate the important role played by parking requirements in determining the land requirements for nonresidential development of all kinds, including large retail stores. Although intended to mitigate traffic, parking requirements have an impact on urban form. Under the minimum requirements above (scenario 1), a 200,000 square foot building—between 4 and 5 acres in size—ends up requiring almost 12 acres of land, with most of that extra space used for required parking.

³⁰ The survey of parking requirements and Wal-Mart host towns was completed both through interviews with planners and perusals of zoning codes. It included the California localities of Union City, Seneca, Long Beach, Napa, Pleasanton, Los Angeles, Redwood City, and Mountain City. Also surveyed were Duluth, Minnesota; Irving, Texas; and Dover, Delaware. In addition, the Institute of Transportation Engineers' parking generation rates were consulted, as was a survey of parking requirements carried out by the American Planning Association. Almost all the codes recommended between 4 and 5 parking spaces per 1,000 square feet, and most made no distinction between grocery and retail.

Scenario 1 (one parking space per 250 square feet of floor area):

Total Square Footage	Parking Spaces	Parking (Sq. Ft.)	Landscaping Requirements	Total Sq. Footage	Total Acreage
150,000	600	198,000	34,800	382,800	8.80
160,000	640	211,200	37,120	408,320	9.39
170,000	680	224,400	39,440	433,840	9.97
180,000	720	237,600	41,760	459,360	10.56
190,000	760	250,800	44,080	484,880	11.15
200,000	800	264,000	46,400	510,400	11.73
210,000	840	277,200	48,720	535,920	12.32
215,000	860	283,800	49,880	548,680	12.61
220,000	880	290,400	51,040	561,440	12.91

Scenario 2 (one parking space per 200 square feet of floor area):

Total Square Footage	Parking Spaces	Parking (Sq. Ft.)	Landscaping Requirements	Total Sq. Footage	Total Acreage
150,000	750	247,500	39,750	437,250	9.65
160,000	800	264,000	42,400	466,400	10.30
170,000	850	280,500	45,050	495,550	10.94
180,000	900	297,000	47,700	524,700	11.58
190,000	950	313,500	50,350	553,850	12.23
200,000	1,000	330,000	53,000	583,000	12.87
210,000	1,050	346,500	55,650	612,150	13.51
215,000	1,075	354,750	56,975	626,725	13.83
220,000	1,100	363,000	58,300	641,300	14.16

Scenario 3 (one parking space per 143 square feet of floor area):

Total Square Footage	Parking Spaces	Parking (Sq. Ft.)	Landscaping Requirements	Total Sq. Footage	Total Acreage
150,000	1,050	346,500	49,650	546,150	12.56
160,000	1,120	369,600	52,960	582,560	13.39
170,000	1,190	392,700	56,270	618,970	14.23
180,000	1,260	415,800	59,580	655,380	15.07
190,000	1,330	438,900	62,890	691,790	15.90
200,000	1,400	462,000	66,200	728,200	16.74
210,000	1,470	485,100	69,510	764,610	17.58
215,000	1,505	496,650	71,165	782,815	18.00
220,000	1,540	508,200	72,820	801,020	18.41

Location questions

As noted earlier, supercenters are generally located on the fringes of urban areas. Land is more plentiful and less expensive on the outskirts of metropolitan areas. Available land closer to urban

cores is more likely have buildings that need to be demolished before a big box can be constructed, increasing the cost of construction.

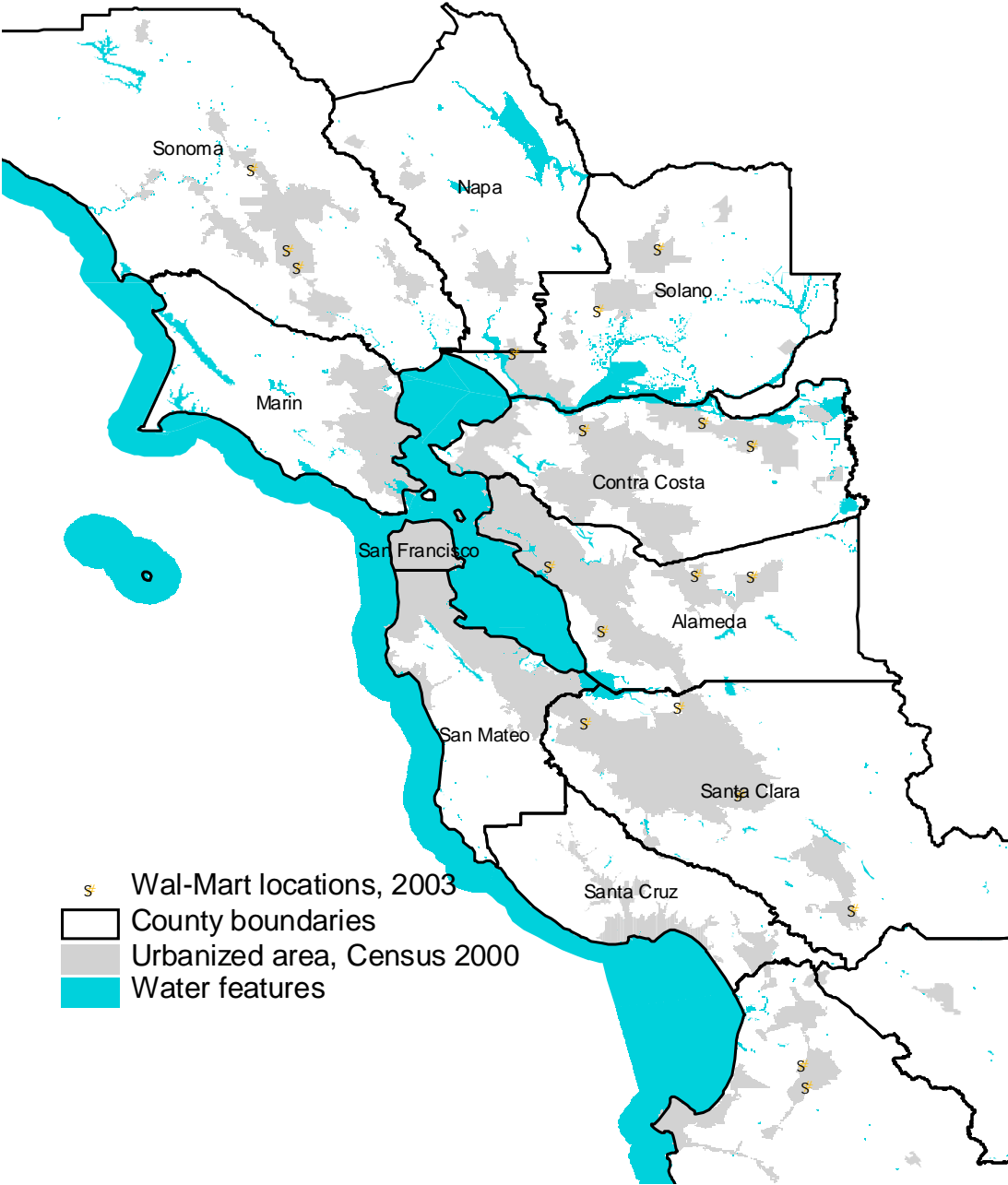
In the case of Wal-Mart, supercenters are also located on urban fringes because that is where the company's conventional discount stores are, and many supercenters are the result of discount store conversions. A map of the 19 existing Wal-Marts in the Bay Area shows that they are no exception: Wal-Mart discount stores are overwhelmingly located outside metropolitan centers (see Figure 4, below).

Assuming that most supercenters will be built in fringe areas, the question at hand is whether this can be considered *new* fringe development. If Wal-Mart closes an existing smaller store and opens a supercenter nearby, in one sense this is new, because a larger building has replaced a smaller one. In this case, the amount of new development on the periphery could be said to be the difference between the size of the discount store and the size of the supercenter.

But the grocery component may be taking the place of a conventional supermarket that would have been built in its absence. In that case, the amount of new construction is smaller: the 10,000 or 20,000 square feet in difference between the foregone supermarket and the supercenter's grocery component.

It is also possible that an outlying supercenter will attract enough customers away from a more centrally located supermarket to cause it to shut down. In this case, in addition to the vacancy problems described in the previous chapter, there will be a shift of economic activity to the periphery, which may be a catalyst for hastened development of the outlying area.

Figure 4: Location of Wal-Mart stores in the study area



Traffic

Does a supercenter generate more or less traffic than a large supermarket plus a conventional discount store? In at least one sense, these are all the same: the overwhelming majority of trips to discount stores, supercenters and supermarkets are made by auto. The main differences are not in travel mode, but in trip length and possibly trip frequency.

Shoppers will likely drive farther to access a supercenter grocery store than they would to a conventional supermarket. There are two main pieces of evidence for this. The revenue per square foot in Wal-Mart supercenters nationwide is higher than that in Safeway, Albertsons, and other supermarket chains, despite Wal-Mart's having lower prices. Also, the grocery store component of a Wal-Mart supercenter can be expected to average 60,000 square feet, which is larger than the average store size for supermarkets. Both of these facts imply that supercenters draw substantially more customers than the average supermarket, if household consumption of grocery items is relatively fixed given modest differences in price.

This implies there must be both more traveling for the equivalent amount of grocery purchases at supercenters. Holding development density constant, attracting more households means a supercenter draws from a geographically larger catchment area. From a regional perspective, this means there will be an increase in vehicle miles traveled (VMT). Of course, attracting more households to a single location rather than dispersing those trips to more than one location means that, from a local perspective, there will be a higher concentration of trips where supercenters are built.

These conclusions have little to do with the supercenter being a combination of retail and grocery formats. Rather it is the size of the grocery store component alone—which exceeds the size of most standalone supermarkets in the Bay Area—and the volume of sales in that component that has implications for the amount of travel.

A transportation issue that does relate to the retail/grocery combination is the question of cross-shopping, commonly observed at shopping malls and community shopping centers such as those anchored by conventional supermarkets. Do people patronizing supercenters substitute in-store walking trips (e.g., from the grocery part of the store to the retail part) for some driving trips (e.g., driving to a retail store separately from buying groceries)? If so, this would imply that supercenters reduce auto trip frequency—with an unknown effect on total vehicle miles traveled, depending on the length of the trip to the supercenter and the length of the driving trips that would have been otherwise taken.

Using proprietary consumer panel survey data, AC Nielsen recently reported that the average number of household trips to supercenters has increased along with their expansion into new markets, even as trips to traditional grocery stores have declined. The data also show that the average number of combined trips to supercenters and traditional supermarkets has fallen. This can be interpreted in two ways. First, it may be evidence that cross-shopping is leading to fewer vehicle trips. Second, it could mean that as all stores get larger and farther away—including both supercenters and larger format supermarkets—people choose to travel less frequently and buy in larger amounts.

The discussion of cross-shopping has focused on the number of trips. A more general measure of traffic impacts is total vehicle miles traveled (VMT). The net impact of cross-shopping on VMT is ambiguous. VMT is the product of trip frequencies and trip distances. If the average distance

traveled to a supercenter is longer than to alternative stores, even if auto trip frequency declines somewhat due to increased cross-shopping, VMT could still increase.

The potential costs associated with increased vehicle travel associated with supercenters can be roughly quantified. Illustrative estimates are presented below. The calculations assume the primary difference is in trip length. Given the uncertainties, quantifying the impacts of cross-shopping or greater trip length on trip frequency is not possible.

Trip length

According to the 2001 Nationwide Household Transportation Survey (NHTS), the mean reported one-way length of a trip to buy goods at a grocery store, clothing store, or hardware store was 6.15 miles nationwide.³¹ The length of grocery trips in the Bay Area is likely substantially lower than this, for several reasons. First, the Bay Area is on average more densely developed than the rest of the United States. Second, supercenters are available in the rest of the US, which increases the average reported distance of a grocery shopping trip.

Third, people are likely to drive farther to access clothing or hardware stores than to buy groceries. Retail analysts consider groceries to be “convenience” goods, in which consumers value proximity highly. Clothing is considered a comparison-shopping item, and there tend to be fewer clothing stores within a given radius of a household. While items at hardware stores may fall in the convenience-shopping category more frequently than the comparison-shopping category, hardware stores are less densely distributed still.

To illustrate trip lengths using data that are specific to the Bay Area, Table 22 (below) lists the number of stores in various categories within a five-mile radius of five randomly chosen zip code centroids.³² The number of grocery and convenience stores exceeds the number of other store categories, usually by a large margin.

The last row of the table shows the average maximum distance to a grocery store within the five-mile circles drawn around each of the zip code centers.³³ This is a maximum distance if the stores are spaced evenly apart to cover the five-mile radius circles. The distances range from 0.38 miles to 1.58 miles, substantially less than the reported national average of 6.15 miles. The analysis below splits the difference and uses three miles for the typical one-way grocery store trip distance in the Bay Area.

³¹ Data table provided online at nhts.ornl.gov.

³² A centroid is a point representing the center of the zip code area. Lists of stores within five miles of the zip code center were accessed at yp.yahoo.com, September 15, 2003.

³³ A five-mile radius circle is 78.5 square miles in area. For each zip code centroid, 78.5 is divided by the number of grocery stores within a five-mile radius to get average land area per grocery store. This calculation assumes that the stores within a given market area are evenly spaced.

Table 22: Average Distance to Grocery Stores from Selected Zip Code Centroids

Zip Code Centroid:	95120	94603	94028	94589	94951
City:	San Jose	Oakland	Portola Valley	Vallejo	Penngrove
<u>Stores within five miles</u>					
Hardware	13	23	3	14	15
Women’s clothing	22	68	10	21	19
Grocery and convenience	56	172	10	53	31
Men’s clothing	10	27	2	10	2
Department stores and big box discount stores	13	25	0	10	10
Maximum distance to grocery store ^a (miles)	0.67 mi	0.38 mi	1.58 mi	0.69 mi	0.90 mi

^a See footnote for calculation details

Supercenters will be less common than grocery stores in general, so the average supercenter grocery trip will be longer. To estimate how much longer, the report uses the fact that supercenter grocery revenue is about three times that of supermarket revenue, on average (see Chapter 2). As an *upper* bound, the analysis thus assumes that supercenter trip lengths are triple our estimate of the average grocery trip, or nine miles each way. The *lower* bound estimate assumes that supercenters only involve two miles of travel further than the average grocery trip, or five miles each way, based on a comparison of the average number of daily trips to grocery stores and supercenters.³⁴

These assumptions are based in large part on national averages. Locating supercenters in dense areas near the urbanized heart of the Bay Area region would likely result in shorter trips, although traditional grocery trips are likely shorter in dense urbanized areas. The assumptions used here are based on the best available data.

Trip frequency

Wal-Mart’s 4,688 stores worldwide draw over 100 million customers each week (Wal-Mart Corporation 2003),³⁵ with a per-store average of 3,047 customer visits per day. For the U.S. only, Wal-Mart’s annual revenue of \$244,524 million, divided by an estimated per-customer revenue per supercenter visit of \$55 for Wal-Mart’s 3,400 U.S. stores (Barry 2003; Wal-Mart 2003),

³⁴ Chapter 2, Table 1, reports weekly average sales per supermarket and revenue per transaction. Those imply an average of 2,012 supermarket visits per day, assuming one transaction per visit. Wal-Mart discount centers average 3,315 customers per day (see below). This implies that supercenters draw 65 percent more visitors per day. Assuming the catchment area scales with the number of customers, this implies that supercenters draw on average from a five-mile radius (1.65 * 3 miles).

³⁵ “Wal-Mart Stores, Inc. at a Glance,” fact sheet at www.walmart.com. The number of stores is drawn from the Wal-Mart 2003 annual report.

gives an estimate of 3,582 daily visits per store.³⁶ Both estimates are similar and reasonable, so the average is used: 3,315 customers per day.

Estimating the number of visits associated with the grocery store component of the supercenter relies on the assumption that the share of visits is equivalent to the typical percentage of revenues associated with grocery sales at the supercenter, that is, 40 percent. This yields a per-store grocery customer count of 1,326. Two trips, one to the store and one back home, are assumed for each visit.³⁷

Estimates of travel-related supercenter costs

An estimate of per-mile motor vehicle costs from the Victoria Transport Policy Institute (VTPI) is used to convert the estimated annual additional vehicle miles of travel (VMT) from those stores into a dollar cost.³⁸ VTPI estimates the personal cost of motor vehicle travel in urban areas at \$0.71 per mile for time, fuel, parking, and the accident risk imposed on the driver. External costs, including traffic delays and air quality impacts imposed by drivers on others, are estimated at \$0.59 per mile during peak travel periods and \$0.33 per mile during off-peak periods in urban areas (VTPI 2003). The estimates here assume that 85 percent of supercenter travel will occur during off-peak hours, which is likely an overestimate. This gives an external cost of 37 cents per mile, and a total cost of \$1.08 per mile.³⁹

Four scenarios are presented, based on the maximum and minimum projected market share from Chapter 2, and the range of additional (round-trip) VMT per trip discussed above (a high of 12 miles and low of 4 miles).

The resulting estimates of additional travel costs are shown in Table 23, below.

³⁶ Barry also reports expenditures per visit for retail stores—\$24 per visit—but that value would have implied a larger number of daily customer visits per store, so to be conservative the analysis uses the method that gives fewer customer visits per store in this instance.

³⁷ Another way to estimate trip frequency would be based on the Institute of Traffic Engineers reference, the ITE's *Trip Generation, 6th Edition*. Those suggest substantially higher trip numbers than reported here. However, transportation scholars increasingly question the reliability of the ITE figures on several grounds, including sample size and sample design issues (e.g., Shoup, 2003).

³⁸ The VTPI is a transportation policy firm that has been lead consultant or subcontractor on projects for agencies including the Environmental Protection Agency, the US Transportation Research Board, and Environment Canada.

³⁹ To account for the full cost of additional driving, the analysis includes both internal costs and external costs in the monetized per-mile figure.

Table 23: Estimates of Additional Driving Costs Due to Supercenter Entry into Bay Area

Projected Market Share	Number of Stores	Est. Grocery Customers Per Day	Additional Miles Per Trip	Additional VMT Per Year (000s)	Personal + External Cost Per Mile	Total Cost of Additional VMT (000s)
6%	16	1,326	4	30,975	\$1.08	\$33,422.41
6%	16	1,326	12	92,926	\$1.08	\$100,267.24
18%	41	1,326	4	79,374	\$1.08	\$85,644.93
18%	41	1,326	12	238,123	\$1.08	\$256,934.80

The range is between 31 and 238 million additional VMT per year, at cost of between \$33 and \$256 million. Although these are only estimates, they nonetheless illustrate that the cost of additional traffic from a supercenter may be considerable.

The next chapter considers other potential community costs associated with a shift from conventional supermarkets to the supercenter format in the Bay Area, with a focus on local economic development issues.

Chapter 6: Other Potential Community & Economic Development Impacts

Almost since Wal-Mart first began its explosive growth in the 1980s, that expansion has been accompanied by fears that it will erode the character and drain the vitality of cities and towns. Its critics have contended that big-box retail is a force not only for consolidation but also for homogenization.

Opponents of discount retail contend that by collecting a host of shopping categories under one roof, big boxes empty Main Streets of the individual enterprises—which are smaller, more intimate and more evocative in character of their communities—that traditionally provided those same goods and services. Economic life might grow as the result of a big box’s arrival, especially in rural townships with little in the way of sales tax revenue, but it will also shift away from downtowns and toward the peripheries, where open space and lower land costs enable discounters to locate. For many communities, this seemed a fair trade. “In the face of the abundance Wal-Mart produced, in the form of more jobs, consumer savings and expanded trade,” one observer commented, “the loss of Main Street seemed an incidental price to pay.”⁴⁰

In the late 1980s academics began to take an interest in the impact Wal-Marts had on small towns and their surrounding regions. Studies have shown that the entry of a big box into a community generally does result in the closure of many small businesses. This conclusion should be considered neither new nor surprising: retail has always evolved and reinvented itself, and along the way it has always spun prior formats and ideas into obsolescence. The business cycle was not invented by Wal-Mart, which perhaps explains why the company has rarely tried to deny or apologize for it. Founder Sam Walton, for instance, in a 1992 interview unabashedly acknowledged his company’s impact on smaller enterprises:

Quite a few smaller stores have gone out of business during the time of Wal-Mart’s growth. Some people have tried to turn it into this big controversy, sort of a “Save the Small Town Merchants” deal, like they were whales or whooping cranes or something that has the right to be protected.

Of all the notions I’ve heard about Wal-Mart, none has ever baffled me more than this idea that we are somehow the enemy of small-town America. Nothing could be further from the truth: Wal-Mart has actually kept quite a number of small towns from becoming extinct by saving literally billions of dollars for the people who live in them, as well as by creating hundreds of thousands of jobs in our stores...

I don’t want to be too critical of small-town merchants, but the truth is that a lot of these folks just weren’t doing a very good job of taking care of their customers. Whenever we put a Wal-Mart store into a town, customers would just flock to us from the variety stores. With our low prices, we ended an era of 45 percent markups and limited selection. We shut the door on variety-store thinking.⁴¹

Conceding Walton’s point does not mean, however, that there is no reason for debate over his company’s impacts on communities. For Walton, in that quote, speaks of two separate issues as

⁴⁰ Quoted in Hornbeck, 1994.

⁴¹ “Sam Walton Recounts the Life of a Salesman.” *Time*. June 15, 1992.

though they were one—whether Wal-Mart results in the closure of small businesses and whether it is beneficial for the towns in which it locates. There is, realistically, no debate about Wal-Mart's impact on smaller stores that compete with it. But there is some room for discussion as to whether the gains brought by Wal-Mart (e.g., lower prices) are worth the trade-off in lost small firms and diminished downtown or neighborhood commercial vitality. Clearly a Wal-Mart (or other big box retailer) is not of benefit to the shopkeeper who loses business as a result of its entry; the question is whether it is of benefit to the community as whole. It is also a question that has no easy answer, for it inevitably becomes freighted with an awkward cargo of intangible ideas. Many people have emotional investments in their communities that are difficult if not impossible to quantify, and it is hard to construct a cost-benefit analysis that factors in such nebulous concepts as “charm” and “sense of place.”

The discussion is also complicated by the fact that downtowns and Main Streets—while receiving the lion's share of publicity—are not alone in being victims of retail decline. The proliferation of big boxes has had a profound effect on retail at every level, from strip malls to enclosed shopping centers. And as retail formats continue to evolve, problems can also develop around the physical structures that get left behind: empty shopping centers, failed strip malls, and big boxes that have closed or moved. The arrival of supercenters makes this a point of particular urgency, since supercenters can create vacancies in two ways. First, they may accelerate the demise of grocery stores. Second, in creating a supercenter Wal-Mart usually closes one or more conventional discount stores, and these, too, normally sit empty while the supercenter thrives down the road. (Few retailers, after all, want to move into an old Wal-Mart if it means competing with a nearby supercenter.)⁴²

This section will review the existing research on Wal-Mart's impact on local communities. It should be stated at the outset that the discussion here is more speculative than the analysis in earlier sections of this report. This is so for a number of reasons. The first, as mentioned above, is that in many ways the value of discount retail lies—literally—in the eye of the beholder. Big boxes have been assaulted on aesthetic grounds a number of times, and much of the ire it arouses in some opponents stems from its influence (real or alleged) on places' “quality of life.” The second reason is that research in the field is not plentiful. For all the interest in big box retail by activists and journalists, relatively few studies have been done on it.

Finally it should be emphasized that all of this research has been conducted on regular discount stores, rather than on supercenters. This is an important distinction discussed further at the close of this chapter. In the event that an entirely new supercenter is built in a town or city, much of the evidence discussed here should be applicable. If, however, a town or city is confronted instead with a discount store being converted into a supercenter, then much of what the research in this chapter describes—particularly about small business closures—may already have happened.

The impacts of a big box will always vary according to the specific conditions in the locale where it opens. There are few universal truths in economic development, and what is a boon for one town may be an intolerable burden for another. The question of aesthetics, for instance, will likely carry more weight in affluent towns, where the savings provided by a Wal-Mart or other discounter will constitute a smaller portion of household income. Lower prices in these places

⁴² “Empty Big Boxes Piling Up in County.” *St. Petersburg Times*. May 12, 2003.

may not seem worth the loss of independent merchants. In a less affluent town, the reasoning may be the opposite.

The chapter is divided into two parts. The first addresses the issue of Wal-Mart as a catalyst of small-business closures, and discusses, among other things, the different impacts the firm seems to have in rural and urbanized areas. The second part discusses the emerging problem of vacant retail property, the possible impacts supercenters may have on that problem, and some potential remedies to it that communities around the country are exploring.

Wal-Mart in rural communities

The evidence that has been assembled about Wal-Mart's impact in rural areas has been fairly consistent: communities that had a Wal-Mart or other discount retailer saw a considerable rise in both their retail sales activity and their sales tax revenues, and on some occasions also saw an increase in overall employment. Shops and firms that directly competed with the discount retailer (for instance, lower-end apparel shops or merchants that sold general housewares) tended to lose a significant amount of business and sometimes were forced to close. Merchants that offered noncompeting goods and services, however—such as higher end restaurants and shops, specialty stores and furniture—saw their fortunes rise considerably, as they benefited from the increased flow of consumers that Wal-Mart attracted.

The first comprehensive look at Wal-Mart's impact was done in 1988, by University of Iowa researcher Kenneth Stone. Stone analyzed the retail tax returns of ten small towns with Wal-Marts and then compared them to 85 non-Wal-Mart towns. After that, he controlled his findings for other conditions—such as the overall economic growth in Iowa over the years he examined—and drew his conclusions from there. Stone's findings were essentially the same as those described above, but he also noted that a new Wal-Mart, while providing some new growth for its host region, could draw as much as three-quarters of its sales from the market share of existing stores (Stone 1989; Stone 1997; Ortega 1998).

These findings did not generate a tremendous amount of attention in the academic world (as they were not very surprising), but they were seized on by activists and Wal-Mart opponents, and recited at various small-town rallies and planning commission meetings (Ortega 1998). Wal-Mart, concerned by this development, hired a team of researchers at the University of Missouri's business school to conduct a second study of Wal-Mart's impacts. The team was paid \$10,000 for their work, and the study was conducted on ten counties that Wal-Mart chose (Ortega 1998).

The results of the Missouri study were not terribly different from Stone's. It was again shown that the number of businesses fell in all counties that had a Wal-Mart arrive, and that retail taxes rose. The Missouri researchers also pointed out, however, that the businesses remaining after Wal-Mart arrived were larger and employed more people, and they concluded that all the counties had seen "growth or revitalization" after Wal-Mart opened. The study failed to control, however, for external economic conditions—Missouri farm towns were growing in general in the years the researchers chose to examine (Keon, Robb and Franz 1989).

A third examination of Wal-Mart's effects, this one looking at 15 small towns in Western Illinois, was published in 1992. Again the results showed that total retail sales grew considerably (in this case by 15 percent) and that stores competing with Wal-Mart suffered. This study also

demonstrated, however, that the impacts in Western Illinois were significantly less than those in Iowa. The reason, the researchers decided, was that the Illinois towns had more mature retail environments prior to Wal-Mart's arrival. Because the market was already competitive, many of the relatively inefficient businesses had already been eliminated or forced to adjust, and this made Wal-Mart's effects less dramatic. In Iowa, by contrast, where retail markets were immature, many of the small businesses had existed without any competition. This sort of local monopoly often breeds inefficiency (the "45 percent variety store markup" Walton referred to), and the inefficiency leaves the business vulnerable to underpricing when a company like Wal-Mart arrives (Gruidl and Kline 1992).

In 1994, J.R. Hornbeck, an economist with the Congressional Research Service, wrote his own report on the impact of discount retailers on rural communities, part of which involved reviewing and comparing the earlier studies. He came to many of the same conclusions (Hornbeck 1994). Finally, in 1995, Stone published an update of his original work, which found that Wal-Mart stores in Iowa he had originally examined had attracted customers from a much larger radius than any stores before. But he also found that this "pull" factor reached a peak relatively soon: town-wide sales reached a zenith within 2-3 years, and then began to decline, sometimes to pre-Wal-Mart levels. The merchants who sold non-competing goods in these towns continued to benefit from spillover business, while competing businesses continued to suffer (Stone 1995).

Economic development

The question of how to define local economic development has always been a vexing one for economists. First, it is no easy task to determine when new retail development actually creates wealth, and when it simply crowds out existing economic activity. Second, local economies rarely confine themselves to city limits. On the simplest level, income and jobs in any given locality will grow if one of four things happens: local businesses invest more; government agencies begin procuring more local goods; households begin spending more and saving less; or people outside the area begin to buy more goods and services that are produced locally. The first three all have obvious limits. As Pittman and Culp (1995) argue, employment would certainly rise if all households in a city chose to save nothing and spend everything they earned, but no responsible economic development official would advocate such an action. The real potential for growth in a local economy comes instead from the fourth circumstance—the outside demand for goods sold inside the city limits.

In some instances, then, discount retail stores *can* qualify as economic development, and lead to a net gain for the communities that host them. If a big box brings people into a city or town because it is selling goods that previously were not available, and for which they would have otherwise had to go elsewhere, this would qualify as economic development. Similarly, if the opening of a big box discount store induces local residents to buy locally goods that they would otherwise have left town to get, then this too qualifies as economic development (Pittman and Culp 1995). This latter phenomenon, called *travel substitution*, is what seems to happen in the early stages of many Wal-Marts (Hicks and Wilburn 1999).

Because they opened in rural areas that had relatively little retail activity, the Wal-Marts created growth for their towns by becoming magnets for consumers ten, twenty and sometimes fifty miles away, and also by preventing local residents from driving to other towns for merchandise. The researchers who looked at these young Wal-Marts concluded that they were meeting unmet

demand, and that the gains in retail trade they brought in were real, even when the closure of other businesses was accounted for. (One could extrapolate from this and argue that a Wal-Mart placed in the impoverished inner city might have similar economic development effects, since disinvested inner cities also suffer from isolation, high prices, and a lack of consumer choice.)

The problem is that the conditions described above often do not last, and they are particularly unlikely to last in the non-urbanized areas where Wal-Mart likes to open stores. In regions where the population is slow-growing or static, retail markets can quickly become saturated, and at that point retail stops being a vehicle for economic development and instead becomes a zero-sum game: new entrants do not create new wealth, but profit only at the expense of others, by grabbing a larger slice of a finite pie (Bluestone 1981; Hornbeck 1994). When every town has a mature retail market, the effects of travel substitution taper off, as does the incentive to drive to another community for goods. And saturation has historically been an explicit component of Wal-Mart's business strategy—Sam Walton himself said the company's goal was to “saturate a market area by spreading out and then filling in” (Hornbeck 1994; Ortega 1998). Wal-Mart eventually built, for example, 40 stores within 100 miles of St. Louis, Missouri (Ortega 1998).

The saturation strategy, like much of Wal-Mart's business model, grew out of the emphasis it placed on efficient distribution systems. But it makes excellent sense from a competitiveness standpoint as well, because in saturated markets the advantage goes overwhelmingly to larger firms (Hornbeck 1994). By putting new stores in relatively close proximity to old ones (or by converting existing stores into supercenters) Wal-Mart erects large barriers for any new competitor that wants to enter the market (Graff 1998). For the towns that host a Wal-Mart, however, saturation often means that a temporary burst of growth might quickly fade, and be replaced by a more ordinary zero-sum price war.

Wal-Mart impacts in urbanized markets

A slightly different scenario, which may be more relevant in some areas of Northern California, is what happens when Wal-Mart enters more urbanized markets, as it is now starting to do. The evidence here is more sparse, because it is only in recent years that the company has begun moving away from its rural strongholds, but the information assembled to date suggests that the impact of a conventional Wal-Mart in these areas tends to be diluted: fewer businesses close as a result of its arrival, and communities tend to be less altered by its presence.

The reasons for this are essentially the same as those identified by the researchers in Western Illinois, although a few additional factors are at work as well. Urbanized areas tend to have populations that are not only larger but also more dynamic than rural ones. The presence of more people, coupled with the regular influx of newcomers, makes it harder for a retail market to reach saturation. But more importantly, a dense population usually means that a retail market is already mature, and that competition has already purged it of inefficient businesses and business practices. In these circumstances, a Wal-Mart offers smaller savings to consumers on its arrival, and so it is unlikely to siphon away business on the scale that it could in an underdeveloped retail market. Certainly some businesses may still be forced to close or reposition themselves, but the impact will on the whole be considerably less.

Intangible Effects: Aesthetics, Tourism and Activism

Although the authors of the Northeast study attribute most of the diluted impact there to the region's mature markets and increased population density, they also point out that intense consumer opposition to Wal-Mart likely played a large role as well, and that this opposition was rooted in part in concerns about tourism. By the time Wal-Mart expanded to the Northeast, its reputation as a "Main Street killer" had preceded it. The Northeast's tourism industry is based largely on the area's history, and small towns there are in many ways commodities unto themselves. Thus the notion of a quaint downtown being replaced by an unsightly box in this instance had larger implications than the simple arithmetic of taxes gained and lost. Concern arose over the problem of "aesthetic mismatch"—the presence of big stores in small towns—and the harm it could cause (Hornbeck 1994).

Although aesthetic mismatch may seem a superficial concern, it is not entirely without foundation. To the extent that tourist-dependent towns trade on their physical appearance and the various images associated with it (i.e. "small town charm"), the interruption of that appearance can have a detrimental economic impact (Bosselman, Peterson and McCarthy 1999). The impact is less tangible and longer-term than the immediate boom or bust of a big box discounter, but it is no less real. Of course, here again income plays a role. The urbanized Northeast tends to be more affluent than the rural South and Midwest, and residents there may be more willing, as a result, to sacrifice some lower prices for the sake of aesthetics.

Areas in the Northeast have mounted considerable community and sometimes governmental opposition to the arrival of discount retailers, and in particular to the arrival of Wal-Mart. Sprawlbusters, the grassroots group whose purpose is to defeat big box retail, is headquartered in Massachusetts, and the state of Vermont used legislative, activist, and litigious methods to fight the entry of Wal-Mart for ten years, before finally losing a court case in 1995. It is not unreasonable to think that in areas where the discounter is fought this ferociously its market power may not be as great—at least not at the outset.

A second potential factor in Wal-Mart's impact on urban areas has to do with labor relations. Urban areas, and particularly cities in coastal regions, tend to be much more sympathetic to unions than rural and heartland areas. Thus in the cities organized labor's concerted campaigns against Wal-Mart may be more of a factor. It is not likely that labor concerns would trump aesthetic and sprawl-related concerns, but they may supplement them.

Greyfields and ghostboxes: The problem of vacant retail space

Retail is an inherently turbulent industrial sector, and what rides in as a new format today may well be an outdated relic tomorrow. The big box is no exception. Just as regional malls and the first generation of big boxes sapped vitality from some downtowns, so too is the new generation of big box construction rendering some malls and older discount retailers unnecessary. In some ways this is more problematic than the dilemma of declining downtowns. Downtowns, with their smaller and more varied building types, may have a better chance at being adapted and re-used (assuming that zoning bylaws permit such reuse)⁴³, simply because they can host a greater number of potential uses. A failed hardware store can become a specialty clothing shop, a

⁴³ Among other laws, parking ordinances often freeze otherwise useable buildings in their existing uses.

restaurant, or a bicycle repair shop. There are, by contrast, relatively few re-uses for a failed big box—generally another big box merchant is required.

Failed outlying retail space is generally divided into two categories: greyfields and ghostboxes. A *greyfield* is a declining regional mall, one whose sales are fading and whose anchor tenants may have left or gone out of business. (A mall is considered a greyfield when its sales fall below \$150 per square foot; a Class A mall, by contrast, averages sales of \$400 per square foot (Price Waterhouse Coopers 2001). It was estimated in 1998 that 7 percent of the country's regional malls were greyfields, while another 12 percent were declining badly enough to become greyfields by 2005 (Price Waterhouse Coopers 2001; Kures 2003). A *ghostbox* is a freestanding big box retail building that has been abandoned. Both pose the same problem for communities: the potential for blight, and the impression—created by any sort of vacant structure—that something has gone wrong in the community (Armstrong 2001).

Retail structures can go dark for a number of reasons, although one of the most common is a shift in population. Retail follows its customers, and a cursory look at the past fifty years of industrial change in America shows clearly that retail outlets, like Americans overall, have spread out from the center cities. Inner ring malls, which once drew business away from downtown central business districts, are now themselves losing business to exurban discount centers. Retail's evolution is also spurred by demographic changes: the enclosed mall, which was retail's chosen format in the 1970s and 1980s, was designed around families who had more time for leisure shopping. As parents now work more and juggle an increasing number of tasks, shopping formats have altered to meet their needs. Only a handful of enclosed malls are now under construction, and so-called "lifestyle" and "power" centers are the retail style *du jour* (Armstrong 2001; Kures 2003).⁴⁴ In the 1980s, 55 percent of all retail stores were built in shopping centers: today that number is 20 percent, as freestanding retail has come more into vogue.⁴⁵ Shopping centers, according to the Urban Land Institute, should reinvent themselves every 5 to 10 years in order to stay competitive (Beyard and O'Mara 1999). Many do not, and many decline as a result.

Retail outlets also go dark as a result of the plain fact of competition. A given area can only support so many stores, and a saturated market will eventually correct itself, expelling the least competitive stores from the field. The US retail sector has been undergoing a corrective shakeup since the 1990s, leading a number of observers to assert that the country has a whole was "over-retailed" (Jossi 1998; Beyard, Braun et. al. 2001). The oversupply of space is due in part to retail's rapid evolution (Calthorpe and Fulton 2000) but the restructuring it has triggered has led to a number of mass store closures. Woolworth's closed 400 stores in 1997 as it headed into bankruptcy, and Kmart, a troubled company in the past few years, filed for Chapter 11 protection in 2001, and has closed over 600 stores between 2002-2003 (Kures 2003). Montgomery Ward closed 90 stores in 1998 after announcing its own insolvency, and has plans to close another 250 by 2004. JC Penny, Bradlees, Sears and Ames have also announced closures and cutbacks (Armstrong 2001). And Wal-Mart's entry into the grocery sector has in some instances shown similar results. Albertsons, for instance, left the Dallas area entirely when Wal-Mart entered, and

⁴⁴ Lifestyle centers are shopping areas organized around a particular demographic such as affluent baby boomer or young professionals. A typical lifestyle center might feature a "category-killer" bookstore (such as Barnes & Noble), an upscale coffee house, and a large home furnishing store (such as Bed, Bath & Beyond). A power center is a collection of big box discount stores. A Target, a Lowe's and a Staples would be a typical combination.

⁴⁵ Trends in Retail and Shopping Centers, 2002.

left behind a host of empty buildings when it departed. According to Retail Forward, Inc., thirty conventional supermarkets closed between 1997 and 2002 in Oklahoma City after Wal-Mart added seven supercenters to its existing three. The same study asserts that for every Wal-Mart supercenter that will open in the next five years, two supermarkets will close their doors (Retail Forward 2003).

Wal-Mart's phenomenal success has also resulted in the closure of its own stores. The opening of a supercenter usually means the closing of at least one discount store, and because supercenters can be almost twice the size of conventional Wal-Marts, the company is rarely able to re-use the existing building's site. As of July 2003, there were 390 vacant or soon-to-be-vacated Wal-Marts in the United States, amounting to over 30.3 million square feet of unused retail space⁴⁶, plus thousands of acres of unused parking. On a larger scale, there is an estimated 500 million square feet of vacant retail space nationwide, out of six billion square feet total.⁴⁷

Vacant retail stores are not a problem so long as they can be quickly re-leased, and many retail companies—Wal-Mart included—have in-house realty divisions whose job it is to sell off or re-lease unused buildings. But prompt re-leasing is rarely easy. Retail leases are complicated documents to draft and execute, and the municipal permitting process is also often time-consuming. Re-leasing can also be hampered by slow communications between a local real estate dispensation agent and the company's corporate headquarters: sometimes corporate real estate committees meet only infrequently to approve sales and dispositions, other times they may disagree with plans to subdivide properties.⁴⁸ Even in the best of circumstances (if, for example, a new tenant is secured almost immediately after a building closes) a building may sit empty for between six months and a year. This in turn can generate additional costs in the form of police, fire, and other city services, particularly if a structure becomes blighted, with no compensating sales tax receipts.

Under less than optimal circumstances, the delays can be even longer. One common difficulty is that companies are often particular about the shape and dimensions of their big boxes; although to the untrained eye most big box stores look the same, many have configurations specific to their owners, especially on the interior (Armstrong 2001).⁴⁹ In outlying areas where land is plentiful, it may be less expensive to build an entirely new box, rather than refurbish or demolish a box on an already-existing site (Armstrong 2001), because the cost of the new box would be the price of the land plus the price of construction, while the old site would be the price of the land, the price of demolition, and then the price of construction. Even in places where infill development is the only option, an existing box is unlikely to be recycled. When Wal-Mart moved into a former Kmart in Napa, California, it demolished the Kmart building and built its own box in the exact same footprint.⁵⁰

⁴⁶ The count was obtained from the listings of Wal-Mart Realty, Wal-Mart's in-house property disposition company. www.walmartrealty.com.

⁴⁷ These figures come from the National Trust for Historic Preservation.

⁴⁸ Interview with Jim Fletcher, San Francisco commercial real estate broker, September 10, 2003.

⁴⁹ Also see "Empty Big Boxes Piling Up in County." *St. Petersburg Times*. May 12, 2003.

⁵⁰ Interview with Donald Barella, planner, City of Napa, September 10, 2003.

Even when companies are willing to move into old big boxes, their former owners are sometimes reluctant to turn leases over to their direct competitors.⁵¹ Although Wal-Mart Realty looks for tenants to fill its old stores, for example, it will not turn a lease over to Target or Kmart. While this makes sense from the standpoint of profit-protection, it also eliminates the most likely candidates to fill what are, in the end, large and not-very-useful buildings. (A Wal-Mart is more likely, however, to lease to a Home Depot, Lowe's, or other "category killer" that is not considered a direct competitor.)

The consequences of big box abandonment tend to be self-compounding. At the very least, a vacant big box or shopping center anchor can have a drag effect on the sales of businesses around it. For shopping centers, and particularly for older ones that have grocery anchors, the loss of an anchor store can be devastating, as the traffic to its satellites often rapidly evaporates (University of Wisconsin Center for Community Economic Development 2002). Moreover, if a landlord is collecting rent on a vacant property and does not believe it can be re-leased, he or she also loses the incentive to spend money on upkeep of the property. The decline of an area can in this way become a self-fulfilling prophecy: a landlord decides a retail area is no longer vital and so stops putting money into the major building in it. Absent investment, the area does in fact decline, which reinforces the idea that the area is unhealthy, and reinforces the disincentive to invest. Such benign neglect can easily lead to blight.

This is not mere supposition. A considerable amount of research has tied abandoned and decaying buildings to the phenomena of blight and neighborhood decline (Greenberg and Popper 1994; Armstrong 2001; Thabit 2003). The causality is not always clear—that is, in some instances it seems that abandoned buildings are a symptom of neighborhood disinvestment, while in others they seem to be the source—but there is little doubt about the association. Cities with declining populations and rising unemployment levels have consistently been found to have more vacant and abandoned buildings (Armstrong 2001). Vacant buildings, along with their large parking lots, can attract litter, graffiti, and vandalism, as well as loiterers and homeless populations. A decaying building both worsens its own prospects for refurbishment and weakens the vitality of the buildings around it. And big box stores, which are built quickly and cheaply, often have lower-quality construction than other buildings, meaning they tend to deteriorate faster (Greenberg and Popper 1994).

There is no reliable estimate for how long an abandoned big box or mall will sit empty, but plentiful anecdotal evidence exists to suggest that once an area is seen as obsolete, it is hard for it to recover. In St. Petersburg, Florida, four dead big boxes stand within half a mile of each other on Highway 19, but the county is considering rezoning agricultural land, because developers are reluctant to build on the used sites.⁵² An empty Wal-Mart in Bardstown, Kentucky, was vacant for over ten years (Mitchell 2001).

The pathology of abandoned buildings is a fairly-heavily studied subject, and a number of theories have grown up around the causes and consequences of blight. The best known of these is probably the "Broken Windows" theory, which was developed in the 1980s by the criminologists George Kelling and James Q. Wilson (Wilson and Kelling 1982; Kelling and Coles 1996). Broken Windows asserts that blight and dilapidation are precursors not just to disinvestment but also to social disorder and crime. "Untended property," authors claim,

⁵¹ Interview with Donald Barella, planner, City of Napa, September 10, 2003.

⁵² Empty big Box Stores Pile up in County. *St. Petersburg Times*. May 12, 2003.

“becomes fair game for people out for plunder and even for people who ordinarily would not dream of doing such things and who probably consider themselves law-abiding” (Wilson and Kelling 1982: 31). The process by which decay can lead to crime is described:

A stable neighborhood can change...in a few years or even a few months, to an inhospitable and frightening jungle. A piece of property is abandoned, weeds grow up, a window is smashed. Adults stop scolding rowdy children; the children, emboldened, become more rowdy. Families move out, unattached adults move in...Fights occur. Litter accumulates. People start drinking in front of the grocers; in time, an inebriate slumps to the pavement and is allowed to sleep it off. Pedestrians are approached by panhandlers.⁵³

The Broken Windows idea, though dramatic, is highly theoretical, and has never lacked for detractors. But even many of its critics do not dispute the broader literature it springs from, about the effect of physical deterioration on neighborhood and community health. A more accepted and arguably more sophisticated approach to blight is the neighborhood life cycle theory, which contends that without proper upkeep, almost any area can fall into a spiral of disinvestments, as more affluent people move away and poorer in-migrants arrive (Jacobs 1961; Downs 1981; Goldsmith 1995; Metzger 2000). In life-cycle theory as in Broken Windows, the abandonment of buildings is a crucial contributing factor to the downturn of a neighborhood. Abandonment is considered a “signal” of decline, and triggers behavioral changes in neighborhood players—by telling families to leave; telling businessmen not to invest; and telling poorer people to move in—that can start a downward spiral.

Recapture Clauses

Theoretically, the problem of a retail company sitting on its lease should be a solvable one. Almost all lease agreements have what are known as “recapture clauses” built into them. Recapture clauses allow a property owner to take back the lease of any tenant that is underperforming, and re-lease it to a new tenant. In reality, however, these clauses are rarely invoked. In the case of Wal-Mart, this is because the company is often able to negotiate terms that are extremely favorable to it, and which make recapturing very difficult. The case of a discount store in El Paso illustrates this point: Wal-Mart signed a lease agreement for the store that required it to pay a very low base rent, and on then to pay on top of that base rent a proportion of its gross sales. This made the rents quite high, until the company closed the store to open a supercenter two miles away. At that point gross sales, obviously, fell to zero, and Wal-Mart was able to hold onto its lease for a negligible sub-market rate. The property owner took Wal-Mart to court in an effort to get the property back, but lost.⁵⁴

A broader problem with recapture clauses, which applies to almost all large retail properties, is that there is rarely a strong incentive to use them. The loss of a big box or anchor tenant usually means (or at least is interpreted to mean) that the site on which it is located is no longer a viable place for retail business. New big box construction, after all, does not usually harm large, healthy shopping areas, although it can. Generally it accelerates the demise of areas that were already

⁵³ Empty big Box Stores Pile up in County. *St. Petersburg Times*. May 12, 2003.. See also Kelling, George and Catherine Coles. 1996. *Fixing Broken Windows*. New York: Touchstone.

⁵⁴ *Scot Properties vs. Wal-Mart Stores*. US Court of Appeals for the Fifth Circuit. 138 f 3D 571 1998 Lexis 6631. April 3, 1992, Decided.

failing. In these situations, the owner is better off collecting rent on the empty building, rather than taking the building back and risking the prospect of having no tenant—and no income—at all.⁵⁵

Remedies and Local Circumstances

The extent to which such spirals can be avoided or reversed depends to a certain extent on the availability of open land, and on the stringency of local land use regulations. Abandoned buildings are most common in areas where land is plentiful and cheap; in urban areas retailers who want to locate in the market may be more willing to recycle an existing site, particularly if no open space is left. The San Francisco Bay Area, in other words, which is already heavily built and which has a perennially tight real estate market, is far less likely to suffer from large-scale retail vacancy than is Texas. In Minneapolis, which has a thriving retail market and an average retail vacancy rate of only three percent, giant retailers have demonstrated a willingness to locate in old stores, rather than be deprived access to a vibrant and high-spending clientele (Frank 1998).

Even in areas with no shortage of open space, zoning and other ordinances can create incentives to recycle old boxes. In Vermont, which battled Wal-Mart's entry for years in court, the retail company was finally allowed into the state when it agreed to build in the site of an old Kmart—the result of a state law forcing new big box retailers to convincingly rule out existing store shells before they are allowed to build new ones. The second Wal-Mart in Vermont also went up in a recycled site (Frank 1998). Cobb County, Georgia, has introduced tax incentives to try and fill its empty retail centers, coupling them with impact fees on undeveloped land to make the existing buildings more attractive (McNaughton 2003).

In some places, of course, incentives simply won't work. If an area is recovering from a retail glut, then there will logically be more buildings than there are retail clients to fill them. In these instances alternative uses must be found. Old grocery and retail stores have been converted into churches, hospitals, and office buildings. New Urbanist planners have seized on old big boxes and malls as potential sites for transit-oriented mixed-use development, the logic here being that dead malls—which on average occupy 45 acres of land—are some of the few single-owned plots of land large enough to accommodate smart growth initiatives. The Cinderella Mall, in Englewood, Colorado, went dark in 1997. The city took it over and turned it into a mixed-use residential, retail and office development, all on a light-rail line (Bucher 2002).

Other New Urbanist designers have taken old boxes and split them up, partitioning the inside and interrupting the façade, in the hopes of making it look like a series of smaller stores. But as intriguing as the New Urbanist and “smart growth” redesigns of big boxes are, they are also quite rare. Research and discussions with a prominent broker of retail and grocery properties in the Bay Area suggest that dark boxes and grocery stores in the Bay Area can usually be filled relatively soon, but that the replacement use will often alter the economic character of the property.⁵⁶ It is unrealistic to have a chain grocery store like an Albertson's go dark and expect a

⁵⁵ For this reason recapture clauses are more often invoked on underperforming smaller stores—a video store, for instance—that are the satellites of healthy anchors or boxes.

⁵⁶ Fletcher interview, September 10, 2003.

Safeway to replace it. It is more likely that such stores might become ethnic markets or malls, or might be subdivided, with half the space becoming a 24-Hour Fitness or similar gym, and the other half perhaps becoming a discount grocer like Grocery Outlet.⁵⁷

Summary

From one perspective, Wal-Mart's ability to increase retail tax revenues (and often employment) suggests it is a net benefit for the communities in which it chooses to open stores. The loss of small businesses, while perhaps unfortunate, is neither new nor entirely without its advantages. But the reality is more complex.

A supercenter replacing a conventional discount store is likely to have fewer impacts on small stores and downtowns, because one would suspect that discount store has already purged much of the surrounding retail market of its inefficiencies. Where the supercenters are more likely to have an effect is on the grocery stores, which thus far have been relatively shielded from discount competition.

In that respect, it seems that the continued growth of supercenters may hasten the closure of underperforming supermarkets, which could present cities and towns with a problem of retail vacancy. Many of these supermarkets are likely to be older and smaller, which makes them more difficult to re-lease.

The next chapter calculates supercenter benefits and costs to local governments public finances, on both the revenue and service sides of local budgets. While often considered "cash cows" in this sense, the details reveal many nuances and caveats.

⁵⁷ Grocery Outlets stock overruns and discontinued products, i.e., Coca-Cola in cans that still bear a Santa Claus or the Olympic logo, or liquid soap in the prior year's color. Such a strategy allows inventory to be produced at cost or below, but also makes its vertical and horizontal depth wildly unpredictable.

Chapter 7: Potential Fiscal Impacts

Local governments in California have little direct control over their revenues, and even less control over how they can spend what they receive. Municipalities rely heavily on the property tax and sales tax for discretionary funding, but the rates for these taxes have been taken largely out of their hands—a result of the stringent voter approval required for raising such taxes. This has given rise to attempts by growing jurisdictions to regulate their development with an eye primarily to generating tax revenue. This prioritization of tax-generating development projects has been referred to as the “fiscalization of land use policy” (Altshuler and Gomez-Ibanez, 1993).

One result of this fiscalization is a particular emphasis on sales-tax-generating land uses (sometimes known as the “retail bias”), and a disinclination to accommodate new residential development. Residential development is often viewed as a net fiscal loss for municipalities. When projecting the costs of growth, cities and counties—and their consultants—typically use fiscal impact models that attribute the costs of most services to households, rather than to firms. Residents, unless they are childless or affluent, are commonly estimated to require more in city services than they pay for with their taxes and user fees. The consequence is a fiscal policy bias toward sales-tax generating activities. Cities overwhelmingly focus on retail development, where feasible, as a strategy for fiscal balance.

There are two kinds of problems with this approach. First, whether such models are correct is debatable. Some cities, such as Phoenix, Arizona, have surveyed their service departments, and found that nonresidential uses are significant consumers of police, fire, parks, and the like. This is not commonly done in California.

Second, the benefits of attracting and retaining retail development are often not only *lower* than expected, but also more *short-lived*. The average supercenter is expected to generate about \$140 million in gross sales per year, about 75 percent of which may be taxable. But the net fiscal benefit will be less, and in some cases substantially less, due to several factors, including the effects on other retailers. An analysis of the most recent data available finds weak correlations between the presence of large retail general merchandise stores and taxable sales in the Bay Area.

Thanks to their size and to retail shopping by grocery patrons, supercenters will exceed conventional discount stores in taxable sales. But supercenters may be even more prone to capturing existing municipal taxable sales, since supermarkets are ubiquitous in cities in the Bay Area. The net effect on the municipal fiscal situation is unclear; much depends on local market conditions.

Overview

The basic math is easy: Supercenters are expected to generate on the order of \$140 million per year in store revenue (Saporito, 2003 #4), about 75 percent of which can be expected to be

taxable.⁵⁸ If one percent were returned by the state to its originating local government, as provided for by California law, this would yield revenue of about \$1 million per year to local coffers.

However, the net impact is less clearly positive than might appear on first blush:

In most instances new retail outlets take some share of business away from existing retailers in the same city. This is even more likely to occur with supercenters, for reasons explained below. Large general merchandise stores such as Target, Kmart, and Wal-Mart are not strongly associated with higher tax revenue in the Bay Area, with few exceptions.

Because most grocery items are *nontaxable*, the expansion of a retail store into a supercenter is unlikely to be followed by a proportionally equal expansion in sales tax revenue. There may be a relatively small increase in retail revenue, as a result of cross-shopping that generates higher retail sales, but this will be a small jump in taxes in exchange for a considerable increase in the size of the retail store.

At the regional level, retail sales is for the most part a zero-sum game. A big box located on the border of one city may simply drain tax revenue from an adjoining town. Such competition is locally rational but can have negative economic impacts for the region.

Large retail stores draw customers from a geographically extensive area and have many employees. Cities rarely account for the resultant budgetary costs due to increased traffic, use of police and fire services, and employee and patron use of local amenities such as libraries and parks. The likely magnitude of such impacts will vary depending on the particular conditions.

The fiscal landscape in California

The passage of Proposition 13 in 1978 capped the maximum rate of appreciation of a property at two percent per year. New assessments are only made when property is sold, meaning that a business or household that stays in one place for a long time makes smaller contributions over time as a percent of the market value of the property. Over any given period of time, this contribution may not keep pace with the rising costs of city services.

Residential property changes hands far more often than commercial property does, so it is reassessed more often, and the amount of tax revenue derived from residential property has risen somewhat faster than the amount derived from commercial property. A decade ago residential taxes accounted for 32 percent of the total property taxes collected in California; today they account for 38 percent (Morain 2003).

The local sales tax rate generally cannot be changed, outside of a referendum requiring two-thirds of the popular vote. Local sales tax in the study area ranges between 7.25 and 8.5 percent (Board of Equalization 2003), one percent of which is returned for discretionary use to the municipality where the transaction took place. For study area counties where the sales tax

⁵⁸ Need sources for the following. \$100 million in revenue; 40 percent grocery sales; 35% of grocery sales taxable; \$60 + \$15 = \$75 million.

exceeds the 7.25 percent statewide floor, the additional tax is levied to fund county transportation agencies and/or the Bay Area Rapid Transit system, with few exceptions.

Because municipalities cannot control tax rates, they attempt instead to control the development within their boundaries, seeking development that will bring high property value or taxable sales. Large retail establishments have the potential to bring large amounts of revenue, at least in the short term, even to cities that cannot hope to attract high property value land uses. Car dealerships, which move high-priced merchandise at a relatively high volume, are considered an ideal land use, and are frequently subsidized by local governments. Big-box retail stores, which sell less expensive items but do so in massive quantities, are also considered fiscal winners.

A final incentive for cities' pursuit of retail lies in the perception that it is relatively immobile. There was a time when economic revitalization consisted of pursuing manufacturing firms. But manufacturing plants, as states and cities learned to their chagrin, can be built almost anywhere. As soon as it was less expensive for them to be located in other states or other countries, they left (Norton and Rees 1979; Bluestone and Harrison 1982). In contrast, the conventional wisdom goes, retail needs to be near its customers, and is thus less prone to flight. A Wal-Mart store in Salinas cannot leave for Mexico or Malaysia, regardless of how much less expensive land or labor there might be.

Impacts on municipal tax revenue

Municipalities and their consultants commonly believe that big box discount general retail stores have a positive influence on net sales tax receipts. This has been disputed by some researchers, who point out that large retail stores, and general merchandise discounters in particular, might cannibalize sales of existing retail stores within the city limits, depending on the particular size and geography of the municipality.

If big box retail stores increase sales tax receipts, one might expect a correlation between the presence of such stores and retail taxable sales for municipalities. This question was analyzed using taxable retail sales data from the California Board of Equalization and population data from the state Department of Finance for 116 cities in the 12-county study area. Taxable retail sales among study area cities in 2001 ranged between \$667,000 (Hillsborough) up to \$8 billion (both San Jose and San Francisco). Per capita sales ranged all the way from a low of 6 cents up to a remarkable \$746 per resident, although 80 percent of cities fell in the range between \$2.50 and \$18.71 per resident. The high outliers lead to a very skewed distribution, with a mean of \$22.50 and a standard deviation of \$90.

These data were merged with data about the location of discount retail and wholesale club stores from five chains: Costco, Kmart, Sam's Club, Target, and Wal-Mart.⁵⁹ Of the 116 cities in the dataset, 51 (or 44 percent of the total) had one or more of these stores in 2003. There were 26 cities with two or more (23 percent of the total).

At first glance, *total* taxable retail sales were not highly correlated with either the presence of any discount retailers or the number of such retailers. In the regression results, neither the

⁵⁹ Data on locations of the big box retailers was collected in 2003.

presence of one or more big boxes (represented with a dummy variable) nor the number of big box stores had any significant relationship with taxable sales with the city as the unit of analysis.

On the other hand, *per capita* sales told a different story. In a regression using per capita retail sales, big box stores per capita was highly statistically significant. The regression indicated that for each additional general discount store per 10,000 population, a city would be expected to have an additional \$22 per capita in retail sales.

Since more than 90 percent of cities in the Bay Area have less than \$22 per capita in retail sales, but many have one or more of the general discount retail stores in the dataset, the highly skewed distribution of stores seemed to be influencing the analysis.⁶⁰ Further inspection of the data revealed that two small cities with very high per capita retail sales—Sand City in Monterey County, and Colma in San Mateo County—were driving this result. These cities have very small populations (less than 300 residents in Sand City, less than 1,200 in Colma) along with taxable sales in the moderate range (\$200 million per year in Sand City and \$765 million in Colma). Colma has a Kmart and a Target, while Sand City has a Costco.

Conventional regression analysis assumes a normal distribution of the independent variable, which is not true of our data. One method to restore normality is to remove outliers from the analysis. Sand City and Colma were removed from the dataset and the regression was recalculated. The number of big box retailers per 10,000 capita was no longer strongly correlated with taxable sales per capita. This result was robust to city size. The same was true when the analysis was restricted to cities of less than 100,000 (100 cities), cities of less than 50,000 population (79 cities), and cities of less than 25,000 population (49 cities).

What conclusions can be drawn? The analysis tends to confirm two rather unexceptionable premises. First, very small cities can get a big payoff from a big box. Second, for cities of moderate size and/or geographic extent, general merchandisers do not by themselves ensure high tax receipts.

The fact that that a correlation was not found between per capita retail sales and the presence of one of the five kinds of big box store in the data set, except for two extreme cases, does not by itself mean that big box retail stores have no effect on retail sales. There are other more likely hypotheses to explain this result. One is that the taxable retail sales revenues of cities are largely a function of market factors, which cities can do little to significantly change.

A second, potentially contradictory, hypothesis is that many retail uses (including other big box specialty formats such as Home Depot, Toys-R-Us, and Staples) contribute to the overall taxable sales profile of a city, and general merchandisers are just one part of that profile. This may contradict the first hypothesis insofar as municipalities attempt to attract myriad sales tax generating uses.

These alternative explanations cannot be addressed in detail here. However, it is clear that in the Bay Area the location of general merchandise big box stores does not by itself lead to a taxable sales payoff for municipalities.

⁶⁰ Conventional regression analysis (that is, ordinary least squares) assumes that the underlying distribution of the independent variable is normal. This is clearly not the case with taxable sales per resident.

How much taxable revenue will a supercenter generate?

As noted above, it is questionable whether permitting a conventional general merchandise discount store will lead to a net increase in sales tax receipts. This effect may be exacerbated for a supercenter. This is because supercenters compete with supermarkets and grocery stores, a store format that is more evenly spread across the landscape than existing retail stores and shopping centers. As a result, the potential payoff for most municipalities is reduced. Even if the average city doesn't have a regional shopping center or downtown retail concentration to worry about, it has plenty of its own supermarkets and grocery stores that the supercenter may draw patronage from.

This issue can be set aside for the moment to address one of the main questions confronting cities. What volume of taxable sales can be expected to occur at a supercenter? Supercenters are different from conventional discount stores in several ways.

First, they sell groceries and drugstore items, many of which are not subject to sales tax. Cold food and prescriptions are not taxed, while prepared food and most other drugstore items are taxed. In California, the Board of Equalization allows grocers to estimate a percentage of grocery sales that is not taxable and reduces their payments to the state by this amount (BOE Reg. 1602.5).⁶¹ The percentage of taxable sales tends to be in the range of 25 to 35 percent.⁶² The format for the grocery component of a supercenter is actually a combination store—that is, a supermarket and drugstore combination. Therefore the percentage of sales which are taxable in the “grocery” component of a supercenter is likely higher than the average supermarket in California, which does not carry as many taxable items as does a combination store.

Second, supercenters are bigger than discount stores, primarily so they can accommodate the increased selling space needed for the grocery items. Various newspaper and magazine reports put the size of an average Wal-Mart supercenter at between 180,000 and 190,000 square feet, while the size of a conventional discount store is somewhat smaller, perhaps up to 120,000 square feet. Since the estimate of the average selling space for the grocery/drugstore component of a supercenter is 60,000 square feet, most conventionally sized supercenters are equivalent in size to a conventional Wal-Mart plus a large combination store (supermarket and drug).

Third, supercenters will have more customers per day than a conventional store due to the grocery component. Supercenters are widely reported to have substantially more retail sales than a conventional discount store due to cross-shopping from those who came primarily to buy groceries, or who came specifically to take advantage of the one-stop shopping for grocery and retail items available at the supercenter.

These countervailing effects complicate taxable sales predictions. On a square foot basis, retail sales may be less. Because the retail sales component is increased by the presence of a grocery store, and the store as a whole is much larger, gross taxable sales will almost certainly be greater. Gross non-taxable sales may fall, however, as discussed earlier.

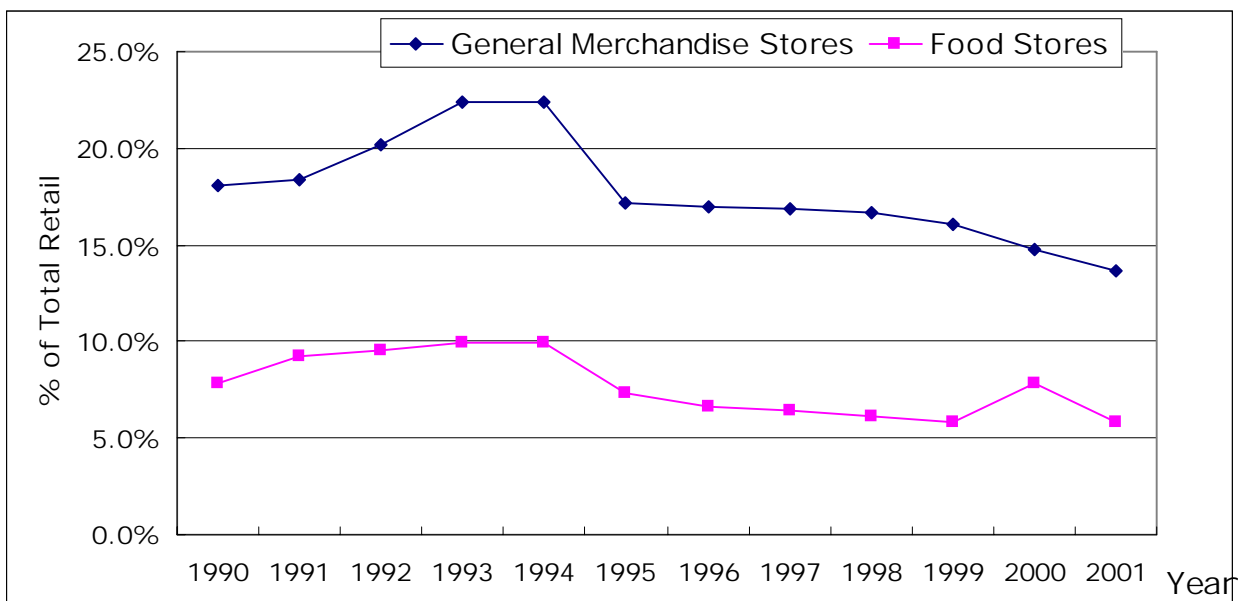
⁶¹ The percentage is not applied to “nongrocery taxable items” such as gardening supplies, sunglasses, stationery supplies, hardware, distilled spirits (i.e., alcohol), and so on.

⁶² Interview with Dick Hagaman, staff at the Analysis & Statistics Department at the California Board of Equalization department, 9/18/03. Hagaman said that there are no official statistics available on this question, but 35 percent has been used as a “rule of thumb” there for a long time.

Revenue stability of the supercenter format

In addition to the predicted average revenues from a land use, local municipalities are concerned about the stability of those revenues. Food sales tend to be less volatile than general merchandise sales. People always need to eat, while during economic downturns they are likely to forgo some leisure consumption. While food sales accounted for between six and ten percent of total sales tax revenue throughout the 1990s in Northern California, general merchandise stores ranged between 15 and 23 percent of total revenue (see Figure 5).

Figure 5: General merchandise and food stores as a percent of retail taxable sales, California



Source: California State Board of Equalization, "Taxable Sales In California (Sales & Use Tax)" [1990-2001, except 1992 and 1996]. The values for 1992 and 1996 use the average between before-year and after-year values of sales

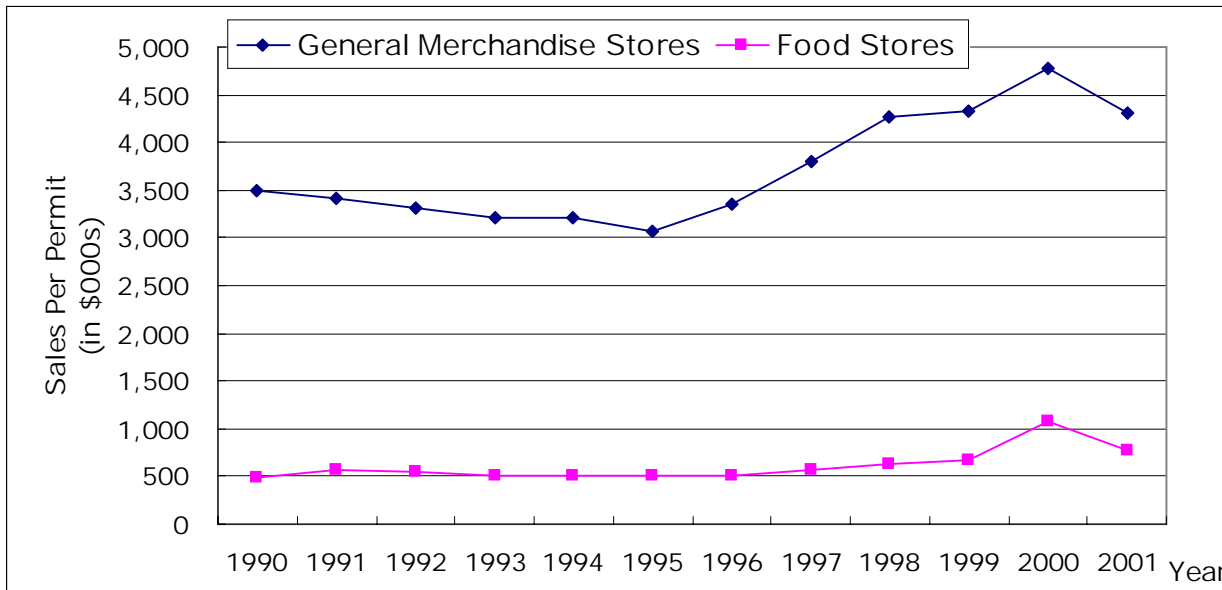
Similarly, Figure 6 shows that taxable sales per permit also vary considerably more for general merchandise stores than they do for food stores. The considerable spikes in taxable sales per permit that are evident at the end of the decade may reflect the results of retail consolidation—the closure of some stores as others (most likely discounters) enter the market and begin commanding a larger share.

The subsidy process

It is not uncommon for municipal governments to offer substantial subsidies to retail establishments that they expect to generate high levels of sales tax revenue. In 1998, the city of Long Beach rebated half the projected sales tax revenues from a car dealership in order to lure that car dealership away from the city of Signal Hill (Shuit 1998). In 1993 the city of Lake

Elsinore agreed to reimburse Wal-Mart \$2.2 million in sales and property tax revenues in exchange for the company building a discount store there (Perkes 1999).

Figure 6: General merchandise and food stores, taxable sales per permit (\$ thousands)



Source: California State Board of Equalization, "Taxable Sales In California (Sales & Use Tax)" [1990-2001, except 1992 and 1996]. Values for 1992 and 1996 use the average between before-year and after-year values of sales.

To procure tax revenue, most city governments see their only rational course of action as competing for businesses that would have located among them even without subsidies or inducements. The results can often be counterintuitive. If every city focuses on building retail, a region can quickly become saturated, which raises the risk of closures, vacancy and blight. From 1990 to 1998, the Los Angeles Community Redevelopment Agency focused heavily on luring retail development to that city; in the same amount of time, the amount of retail space in Los Angeles County increased over 24 percent, while the population increased only 8 percent (Los Angeles Alliance for a New Economy 1999). Retail development also has a relatively low multiplier effect, so city governments who pursue it should be aware that they are chasing tax revenue at the expense of larger economic health.

Summary

Planning in pursuit of tax revenues generally contradicts other planning goals, such as the creation of quality jobs or the provision of affordable housing. Regardless of whether a municipality decides it is in its interest to pursue or even subsidize the location of a supercenter, the net fiscal impact on the region is probably negligible.

The effect on the region of ignoring other planning goals is potentially more serious. As shown above, however, even when it comes to municipalities acting entirely in their short-term self-interest, a supercenter may or may not create a net fiscal benefit. It depends.

SECTION IV: Policy

Chapter 8: Policy Issues and Practice

Issues

The Bay Area faces a substantial transformation of its grocery industry over the next few years. These changes reflect the national restructuring underway in the grocery sector as well as consumer preferences. In general many consumers will see price savings, grocery workers will experience significant wage reductions, and several local governments will encounter a mix of economic development and fiscal impacts, none all good or bad. It is a mixed picture that looks better or worse depending on where one sits.

In particular, while benefits are *diffuse*, the wage and other impacts will tend to be highly *concentrated* in certain places and for certain people. The winners and losers are not only different groups; in this instance, they win and lose to very different degrees.

Some of these changes are best left to the private sector to sort out, while others are matters of public concern. Where does this leave a local city council considering a proposed supercenter? The choices, and the implications of those choices, are complex and less than transparent. Offered in part as a tool for local decision makers, this report concludes that the following issues are important:

- ◆ The entry of supercenters into the Bay Area market will exert substantial downward wage and benefit pressure in a sector that currently is a source of high-wage entry-level jobs.
- ◆ Supercenters will affect land use and traffic. Consumers will likely drive longer distances to shop at supercenters as compared to neighborhood supermarkets. Local governments and regional agencies will have to weigh the impact of that extra driving.
- ◆ Supercenters might also impact land use plans by competing with smaller shops located in more dense downtown areas. To the extent that market transition leaves older, abandoned retail or grocery sites in its wake, issues of local blight and community health might become a concern, particularly where conventional grocery stores serve as anchors for community shopping centers.
- ◆ The fiscal impacts of supercenters are likely less beneficial to local governments than is commonly assumed. Municipal governments should assess whether supercenter revenues represent increased taxable sales, or a shift of sales within the municipality.
- ◆ Supercenters will result in reduced prices for grocery items, with significant benefits to consumers. Lower grocery prices are a considerable benefit in high cost-of-living regions, such as the Bay Area.
- ◆ The costs of supercenters are likely to be concentrated on supermarket workers (in terms

of wage and benefit impacts) and at particular locations (in terms of traffic impacts), while the benefits are more widely distributed and diffuse. Mediating this distribution of costs and benefits is an appropriate issue for public concern.

Supercenters present challenges that will require such public sector attention. The apparent familiarity of big-box retail and grocery shopping belies the complex issues municipalities will soon face if, as expected, supercenters enter the Bay Area market.

A checklist for local officials

The main purpose of this report is to identify the range of impacts likely associated with these trends. Given these, what should local officials do? In practice, each project is best addressed by a case-by-case systematic review of each category of impact and the tradeoffs those impacts often imply. To facilitate that approach, the report provides the following check list of impacts and the primary specific tasks required. This list of key considerations is neither complete nor fully detailed. Neither are all list items equally important. It does, however, indicate the scope and scale of the challenge faced by local decision makers.

A. Economic and Employment Impacts

- | | |
|--------------------------|---|
| <input type="checkbox"/> | <p>How much will the supercenter change grocery prices and selection locally?</p> <p>TASKS: ♦ Need an estimate of the average grocery purchase mix of items
 ♦ Need an estimate of the price changes for those items
 ♦ Calculate ripple (i.e., multiplier) effects of consumer prices on local economy</p> |
| <input type="checkbox"/> | <p>How much will the new supercenter displace existing local retail market share?</p> <p>TASKS: ♦ Need to inventory the local retail base
 ♦ Assess market areas and market impacts</p> |
| <input type="checkbox"/> | <p>What will be the impacts on the local work force?</p> <p>TASKS: ♦ Assess impact on existing retail
 ♦ Calculate direct impact of job changes, lower wages and benefits
 ♦ Calculate impact on net employment
 ♦ Calculate ripple (i.e., multiplier) impacts of wages, benefits and employment changes on local economy</p> |
| <input type="checkbox"/> | <p>Will the new supercenter lead to vacancies or changes in local land use?</p> <p>TASKS: ♦ Inventory vacant land and commercial properties.
 ♦ Assess re-use or redevelopment possibilities for competing sites.</p> |

B. Municipal Finance Impacts

- How much will the new development require in public services?
 - TASKS:**
 - ◆ Services and capital expenditures: Calculate cost of infrastructure & utilities
 - ◆ Traffic and other service impacts?
 - ◆ Calculate the cost of associated economic development incentives, such as tax credits
 - ◆ Assess the impact of redevelopment zone tax-increment financing.
- How much will the new development change local tax revenues?
 - TASKS:**
 - ◆ Assess net changes in local retail sales
 - ◆ Calculate net changes in sales and property tax revenue.
 - ◆ Examine the stability of the retail sales tax revenue over time.

C. Community Impacts

- Will a given big-box footprint possibly expand in the future? In the same line of business?
 - TASKS:**
 - ◆ Ask about future plans up front
 - ◆ Examine industry trends
 - ◆ Plan for expansion contingencies
- What localities will benefit from and/or be disadvantaged by supercenter development.
 - TASKS:**
 - ◆ Assess the differences between local and regional impacts.
 - ◆ Are local gains at the expense of losses in other cities?
Must these be mitigated?
- How will the new retail outlet affect your community's quality of life? For example, will it reduce the appeal of a downtown core that you are trying to preserve or revitalize?
 - TASKS:**
 - ◆ Inventory locations of competing retailers.
 - ◆ Assess impact on existing local retailers.

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Appendices

Appendix A: Estimates of Grocery Market Share, 2010

Current market shares

Market share data are provided on the basis of pre-defined market areas that are smaller than the 12-county study area. Market shares for the aggregated area, with the exception of Sonoma County, are estimated by weighting shares for the supermarket chains by the percentage of total household effective buying income accounted for by each submarket. (Sonoma County market share data are not available.)

The Oakland metropolitan statistical area (MSA), consisting of Alameda and Contra Costa counties, is the largest submarket within the study area, with 34 percent of the population and 32 percent of the gross effective buying income (EBI). The San Francisco MSA, consisting of Marin, San Mateo, and San Francisco counties, and the San Jose MSA, consisting of Santa Clara County, both account for a share of EBI higher than their population, as these areas have higher average income than the rest of the study area. Finally, because of their relatively low household income, the Vallejo-Fairfield-Napa MSA (consisting of Napa and Solano counties) and the Monterey-Salinas “designated market area” (consisting of Monterey, Santa Cruz and San Benito counties) account for 17 percent of the population of the area but only 13 percent of purchasing power. This information is shown in Table A1, below.

Table A1: Population & effective buying income for submarkets (except Sonoma County)

Area Abbreviation	SJ	SF	Oak	VF	MS	
Full Name of Area	San Jose MSA	San Francisco MSA	Oakland MSA	Vallejo- Fairfield MSA	Monterey- Salinas DMA	
Counties	Santa Clara	San Francisco, Mateo, Marin	Alameda, Contra Costa	Napa, Solano	Santa Cruz, San Benito, Monterey	Total, 11- County Area
Population	1,740,132	1,779,917	2,453,587	536,968	738,686	7,249,290
<i>As percent of total</i>	24%	25%	34%	7%	10%	
Households	582,317	702,635	884,984	181,829	236,119	2,587,884
<i>As percent of total</i>	23%	27%	34%	7%	9%	
EBI	80,910	71,426	64,056	53,986	62,448	
HH x EBI (\$ bil)	\$47.12	\$50.19	\$56.69	\$9.82	\$14.75	\$178.55
<i>As percent of total</i>	26%	28%	32%	5%	8%	
% Chains	79.0	78.9	87.4	81.4	82.5	85.4
Sup % Sales	89.0	80.7	87.1	89.2	80.6	70.1

Sources: Trade Dimensions (2003) and authors' calculations.

The purchasing-power shares by submarket from Table A1 are used to estimate distributor and company shares of the market in the 11-county area, as shown in Tables A2 and A3, below.

Table A2: Market share by distributor, study area (except Sonoma County)

Distributor	MS	Oak	SF	SJ	VF	Total
Safeway	2.73	12.97	12.98	9.27	1.61	39.57
Albertsons	1.47	7.53	3.72	5.74	0.76	19.22
Unified Western	0.43	2.29	4.56	3.72	0.47	11.47
Super Store	1.45	3.62	0.22	2.72	1.16	9.17
Fleming	0.80	2.07	0.81	2.21	0.69	6.59
Ralphs	0.45	0.47	2.89		0.18	4.00
Whole Foods	0.12	0.70	1.10	0.82		2.74
Trader Joes	0.07	0.76	0.56	0.37	0.02	1.78
Small Suppliers	0.05	0.51	0.28	0.66	0.08	1.58
Grocery Outlet	0.12	0.44	0.11	0.21	0.07	0.95
Smart & Final	0.08	0.25	0.37	0.21	0.04	0.95
Military	0.24			0.21	0.41	0.86
Mountain Peoples	0.27	0.06	0.20	0.26		0.79
Natures Best		0.06	0.22			0.28
Tree of Life			0.03			0.03
Total	8.29	31.74	28.05	26.41	5.50	100.00

Source: Original data from Trade Dimensions (2003); estimated market shares for 11 county area calculated by authors based on submarket area share of effective buying income (EBI) for households contained within submarket areas.

Table A3 estimates the percentage of each submarket within the study area, with the exception of Sonoma County. (Data are not readily available for Sonoma County because it is a small MSA.) It is notable that in every submarket, including the less densely settled areas of Monterey-Salinas (MS) and Vallejo-Fairfield (VF), the market share of unionized chains is quite high. It is highest in Oakland and Contra Costa Counties (Oak), at 70 percent, and lowest in Napa and Solano Counties (VF), at 57 percent. Union supermarkets account for about two-thirds of revenue in the study area as a whole, excluding Sonoma County.

Safeway is the dominant store label in all markets, with a total share of about 38 percent area wide. Albertsons is second, with 20 percent; miscellaneous independent supermarkets not affiliated with chains take the third spot, with 9 percent; and the next biggest players at 3.7 percent and dropping are Nob Hill, Food 4 Less, Whole Foods, and Raley’s. The rest of the chains, of which there are a total of 39 (not shown in complete detail above) each have less than two percent of the total market in the study area, but do make up 22 percent of the total.

Table A3: Market share by chain, study area (except Sonoma County)

Company/Group	MS	Oak	SF	SJ	VF	Total	Un?
Safeway	2.73	12.05	12.50	8.72	1.61	37.62	Y
Albertsons	1.47	7.53	3.72	5.74	0.76	19.22	Y
Independent	1.00	2.38	3.09	2.24	0.44	9.16	N
Nob Hill	1.04	0.70	0.22	1.64	0.09	3.70	Y
Food 4 Less	0.16	1.17	0.59	0.95	0.18	3.05	N
Whole Foods	0.12	0.70	1.10	0.82		2.74	N
Raleys		1.52			0.98	2.50	50%
Pak N Save		0.92	0.48	0.55		1.95	Y
Save Mart	0.41	0.41		0.92	0.09	1.83	N
Trader Joes	0.07	0.76	0.56	0.37	0.02	1.78	N
Bell			1.32			1.32	Y
Andronicos		0.86	0.31	0.13		1.30	?
PW		0.13	0.11	1.00		1.24	Y
Cala Foods			0.98			0.98	Y
Military	0.24			0.21	0.41	0.86	N
Lunardis		0.10	0.37	0.37		0.84	?
Smart & Final	0.08	0.25	0.31	0.16	0.04	0.84	N
Mollie Stones			0.70	0.05		0.75	N
Food Maxx		0.73				0.73	N
Ralphs	0.29	0.22			0.18	0.69	Y
Draegers			0.45	0.16		0.61	?
All Others	0.67	1.29	1.23	2.36	0.69	6.24	N
Total	8.29	31.74	28.05	26.41	5.50	100.00	
Total union (est.)	5.53	22.31	19.33	17.65	3.13	67.95	
<i>Union share of area</i>	<i>66.71</i>	<i>70.29</i>	<i>68.91</i>	<i>66.83</i>	<i>56.91</i>		

Source: Original data from Trade Dimensions (2003); estimated market shares for 11 county area calculated by authors based on submarket area share of effective buying income (EBI) for households contained within submarket areas.

Trade Dimensions does not provide data on the gross market sales that would enable a per-store estimate of revenue across the study area, but data are available for selected MSAs through the Shelby Report, including the San Francisco MSA. As shown below, revenue per store reaches a high of \$28 million for Draeger's, which has only two stores in the area. Safeway and Whole Foods average \$23 million per store.

Table A4: Market share and revenue per store, San Francisco MSA, 2003

Retailer	Stores	ACV in millions	Rev. per Store	Market Share
Safeway	41	\$963	\$23	41.85
Albertson's	20	\$315	\$16	13.70
All Others	48	\$299	\$6	12.99
Ralphs	20	\$134	\$7	5.82
Whole Foods	4	\$94	\$23	4.08
Mollie Stones	6	\$85	\$14	3.70
Smart & Final	8	\$72	\$9	3.11
Trader Joe's	7	\$60	\$9	2.63
Draeger's	2	\$56	\$28	2.42
Food 4 Less	3	\$43	\$14	1.88
Lunardi's	3	\$29	\$10	1.26
Dehoff Ent.	4	\$23	\$6	0.99
Real Food	5	\$22	\$4	0.94
Andronico's	2	\$19	\$9	0.82
Pacific Supermkt.	2	\$19	\$9	0.82
United Mkts.	2	\$16	\$8	0.70
Nob Hill	1	\$13	\$13	0.56
PW Super	1	\$9	\$9	0.41
Tawa	1	\$9	\$9	0.41
Picadilly Circus	1	\$7	\$7	0.29
Tropicano Russell	1	\$7	\$7	0.29
British Food Center	1	\$5	\$5	0.21
Rincon	1	\$3	\$3	0.12
Total:	184	\$2,300	\$13	100.00

Source: Shelby Report / Trade Dimensions, 2003

Supercenter per-store revenue

Estimates of supercenter revenue in comparison to conventional grocery store revenue are a key assumption in attempting to calculate the potential market capture of supercenters in the Bay Area. Journalistic accounts and industry reports provide one source from which to estimate these numbers. In 2002, a supermarket consultant reported to a reporter from *USA Today* that Wal-Mart achieves a third more volume in grocery sales and related items than traditional stores. (Albertson's is apparently responding by focusing on a combination food and drug format (Grant 2002).)

A 2003 report by Merrill Lynch reports that an average Wal-Mart discount store has annual sales of about \$40 million, with food and food-related merchandise accounting for about ten percent of that (Barry 2003). In a supercenter, by contrast, total annual sales are expected to average \$100 million, and grocery merchandise is expected to account for 40 percent of that. These food sales figures are twice that of an average supermarket, and almost 50 percent above the combination drug- and food-stores of the large companies such as Kroger and Safeway (Barry 2003).

This is borne out for individual markets studied, including Houston, Dallas, Phoenix, Kansas City, Denver, and Atlanta (Table A5). While there is plenty of variation in the average revenue per supercenter, most of this appears to be due to an initially low per-store revenue when first opened, or when several are opened simultaneously. The equilibrium per-store revenue amount is in the 35 to 40 million dollar range, which is about twice the revenue of an average store in the largest chains in the market, whether that be Fry's and Albertson's in Phoenix, Hy-Vee and Cosentino's in Kansas City, or Kroger and Randall's in Houston. In these western metropolitan areas, Wal-Mart supercenters took in between 250 and 300 percent of the revenue of an average supermarket.

Table A5: Wal-Mart supercenters for selected metropolitan areas, 1997 to 2003

Year	Dallas	Houston	Kansas City	Denver	Phoenix	Average
1997 Stores	8	2	2			4
Revenue per store	\$27	\$27	\$41			\$32
Market share	4.85%	1.04%	3.73%			3.21%
1998 Stores	8	2	3			4
Revenue per store	\$24	\$27	\$36			\$29
Market share	4.13%	1.04%	4.77%			3.31%
1999 Stores	13	6	3	1	1	5
Revenue per store	\$22	\$22	\$33	\$22	\$22	\$24
Market share	5.70%	2.35%	4.09%	0.67%	0.49%	3.00%
2000 Stores	NA	10	6	3	6	6
Revenue per store	NA	\$20	\$23	\$15	\$20	\$19
Market share	NA	3.35	5.64	1.28	2.56	3.21%
2001 Stores	21	16	11	4	8	12
Revenue per store	\$25	\$27	\$25	\$23	\$26	\$25
Market share	9.56%	6.63%	10.93%	2.50%	4.22%	7.00%
2002 Stores	26	21	12	6	9	15
Revenue per store	\$29	\$30	\$25	\$20	\$30	\$27
Market share	13.48%	10.00%	12.11%	3.33%	5.34%	9.00%
2003 Stores	28	25	13	7	11	17
Revenue per store	\$38	\$41	\$37	\$37	\$48	\$40
Market share	18.30%	16.69%	17.99%	6.75%	10.10%	14.00%
Range over all years and markets						
	High	Low	Median			
Stores	28	1	8			
Revenue per store	\$48	\$15	\$27			
Market share	18.30%	0.49%	4.77%			

Note: market share for Wal-Mart supercenters only; neighborhood markets in Dallas and Houston excluded.

Market areas may not be equivalent to metropolitan statistical areas in all cases.

Source: Shelby Report / Trade Dimensions.

In Houston, as Wal-Mart supercenters have become more dominant, the total size of the market remained stagnant and then declined over the most recent six month period. Similar patterns occurred in other metropolitan areas.

Supercenter market share estimates for study area, 2010

Wal-Mart is currently in 67 of the top 100 MSAs by population in the US. Its shares for the MSAs range from 0.3 to 28.6 percent, with an average of 9.2 percent. The number of stores ranges from 1 to 27, with a mean of 5.9 stores.

Although there are some small areas where Wal-Mart has captured half or more of supermarket revenues, this probably will not occur in the Bay Area for several reasons. First, developing a number of large stores in a largely urbanized area incurs high land costs. Second, there is a high level of participation in land use decision making by local residents, who tend not to prefer big box formats. Third, the high average incomes of local residents are less suited to Wal-Mart's low-variety grocery format.

To estimate possible future market share in the study area, the \$2.3 billion in revenue reported for the San Francisco MSA, along with current and future population estimates, are used to estimate the current and future size of the study area market in revenue terms. The population estimates below are based on the State of California, Department of Finance, Interim County Population Projections. Sacramento, California, June 2001. Population for 2003 is estimated based on straight-line projection between the 2000 and 2005 values.

Table A6: Size of future market, supermarket sales

	July 2003	July 2010	July 2015
Population estimates			
San Francisco MSA (SF, San Mateo, Marin)	1,792,340	1,845,600	1,842,300
ABAG counties (less Sonoma)	6,687,820	7,205,400	7,420,900
+ Santa Cruz, San Benito, Monterey	7,455,860	8,082,400	8,375,600
Expected market revenue multiplier			
San Francisco MSA	1.0	1.0	1.0
ABAG counties	3.7	4.0	4.1
ABAG + Santa Cruz, San Benito, Monterey	4.2	4.5	4.7
Market size estimate (\$ bil)			
San Francisco MSA	\$2.3	\$2.3	\$2.3
ABAG counties	\$8.5	\$9.2	\$9.4
ABAG + Santa Cruz, San Benito, Monterey	\$9.7	\$10.4	\$10.8
Percent increase	-	7%	11%

Sources: revenue for SF MSA for July 2003 from Shelby Report / Trade Dimensions; population estimates from Department of Finance (June 2001).

This information on market size and market share is used to estimate Wal-Mart supercenter market share scenarios for the Bay Area study region in the year 2010, as noted in Chapter 2 and repeated below.

Table A7: Market Share Scenarios, Wal-Mart Supercenters, 2010

Assumptions:

Market revenue, 2003, \$ billions	\$9.7
Market revenue, 2010, \$ billions	10.4

Store Development Scenarios (Existing Cities)

	Stores	Rev/Store (\$ millions)	Revenue (\$ millions)	Market Share
Phoenix 2003	11	\$48	\$525	5.1%
Houston 2003	25	\$41	\$1,018	9.8%
Dallas 2003	28	\$38	\$1,061	10.2%

Market Share Scenarios (Existing Cities)

	Market Share	Revenue (\$ millions)	Rev/Store (\$ millions)	Stores
Denver 2003	6.75	\$702	\$37	19
Dallas 2003	18.3	\$1,903	\$38	50

Further 2010 Scenarios, Store Basis, Author's Estimates

	Stores	Rev/Store (\$ millions)	Revenue (\$ millions)	Market Share
Scenario 1	10	\$37	\$370	4%
Scenario 2	16	\$40	\$640	6%
Scenario 3	26	\$40	\$1,040	10%
Scenario 4	41	\$48	\$1,968	18%

Source: Market Share estimates from Shelby Report and Trade Dimensions, and authors' calculations.

Appendix B: Employment and Payroll Comparisons with Similar Industries

Table A8: Employment in the food and drinking place industry, study area, 1998 to 2001

Area	1998	1999	2000	2001
Alameda	33,751	33,544	35,627	35,423
Contra Costa	21,030	21,656	22,971	23,361
Marin	8,867	9,159	9,342	9,249
Monterey	10,405	10,723	10,626	10,755
Napa	4,326	4,684	4,774	4,893
San Benito	1,010	1,004	996	974
San Francisco	40,075	40,409	42,282	42,640
San Mateo	22,421	22,660	23,247	22,734
Santa Clara	52,228	51,155	52,372	53,526
Santa Cruz	7,458	8,059	8,378	8,726
Solano	8,508	9,159	9,240	9,545
Sonoma	12,868	12,422	12,422	12,453
Northern CA Region	224,945	226,633	234,277	236,280
California State	870,458	890,623	921,638	946,161

N/A - Not Available

Source: County Business Patterns Annual (1998-2001), US Department of Labor, Bureau of the Census

Table A9: Payroll per employee in the food and drinking place industry, study area, 1998 to 2001

Area	1998	1999	2000	2001
Alameda	\$13,397	\$13,634	\$13,498	\$13,561
Contra Costa	\$12,837	\$13,287	\$13,441	\$13,150
Marin	\$14,954	\$15,026	\$15,267	\$15,314
Monterey	\$13,687	\$13,906	\$14,076	\$8,809
Napa	\$14,977	\$14,740	\$16,100	\$15,090
San Benito	\$10,116	\$11,099	\$12,008	\$11,578
San Francisco	\$16,422	\$16,685	\$17,267	\$16,457
San Mateo	\$16,243	\$16,705	\$16,917	\$16,097
Santa Clara	\$14,143	\$14,234	\$14,887	\$15,065
Santa Cruz	\$12,269	\$11,985	\$12,412	\$12,344
Solano	\$11,105	\$10,870	\$12,135	\$10,646
Sonoma	\$12,146	\$12,435	\$13,172	\$12,769
County Average	\$13,525	\$13,717	\$14,265	\$13,407
California State	\$12,947	\$13,162	\$13,290	\$13,024

N/A - Not Available

All figures adjusted to 2001 dollars using the CPI-W index for the San Francisco-Oakland-San Jose County area

Source: County Business Patterns Annual (1998-2001), US Department of Labor, Bureau of the Census

Table A10: Employment in department stores, study area, 1998 to 2001

Area	1998	1999	2000	2001
Alameda	5,866	5,776	6,676	6,087
Contra Costa	0	0	0	0
Marin	954	946	1,151	929
Monterey	15,896	14,634	14,972	14,591
Napa	1,010	953	974	1,496
San Benito	0	0	0	0
San Francisco	N/A.	N/A.	N/A.	2,561
San Mateo	4,116	3,257	3,437	3,500
Santa Clara	9,160	8,507	9,910	8,760
Santa Cruz	1,082	958	942	821
Solano	2,279	2,121	2,367	2,401
Sonoma	2,372	2,328	2,328	2,545
Northern CA Region	44,733	41,479	44,757	45,692
California State	171,946	159,919	169,988	162,699

N/A - Not Available

Source: County Business Patterns Annual (1998-2001), US Department of Labor, Bureau of the Census

Table A11: Payroll per employee for department stores, study area, 1998 to 2001

Area	1998	1999	2000	2001
Alameda	\$16,654	\$18,840	\$17,265	\$17,765
Contra Costa	\$0	\$0	\$0	\$0
Marin	\$21,556	\$22,673	\$19,305	\$20,996
Monterey	\$16,543	\$17,715	\$17,401	\$0
Napa	\$14,291	\$16,858	\$17,842	\$14,484
San Benito	\$0	\$0	\$0	\$0
San Francisco	N/A	N/A	N/A	\$27,073
San Mateo	\$15,896	\$18,306	\$16,897	\$17,309
Santa Clara	\$18,374	\$20,261	\$18,630	\$19,431
Santa Cruz	\$13,459	\$14,961	\$14,620	\$15,448
Solano	\$15,421	\$17,783	\$15,991	\$16,122
Sonoma	\$16,861	\$18,051	\$17,152	\$17,097
County Average	\$13,550	\$15,041	\$14,100	\$13,810
California State	\$16,139	\$17,723	\$17,008	\$17,158

N/A - Not Available

All figures adjusted to 2001 dollars using the CPI-W index for the San Francisco-Oakland-San Jose County area

Source: County Business Patterns Annual (1998-2001), US Department of Labor, Bureau of the Census

Table A12: Employment in the accommodation industry, study area, 1998 to 2001

Area	1998	1999	2000	2001
Alameda	4,533	4,860	5,337	5,299
Contra Costa	1,664	1,799	1,993	1,775
Marin	1,273	1,155	1,111	959
Monterey	6,951	7,162	6,283	6,438
Napa	1,809	1,987	1,973	2,309
San Benito	52	78	81	85
San Francisco	22,841	23,599	23,284	20,288
San Mateo	5,373	4,968	5,512	5,929
Santa Clara	7,502	7,853	7,471	7,657
Santa Cruz	916	913	944	1,453
Solano	579	623	444	584
Sonoma	1,475	1,932	1,932	2,220
Northern CA Region	56,966	58,928	58,365	56,997
California State	181,607	188,855	189,672	191,628

N/A - Not Available

Source: County Business Patterns Annual (1998-2001), US Department of Labor, Bureau of the Census

Table A13: Payroll per employee in the accommodation industry, study area, 1998 to 2001

Area	1998	1999	2000	2001
Alameda	\$19,445	\$20,196	\$20,438	\$20,089
Contra Costa	\$18,459	\$18,345	\$18,974	\$18,417
Marin	\$21,192	\$22,589	\$34,618	\$20,696
Monterey	\$23,676	\$25,611	\$23,413	\$8,893
Napa	\$24,367	\$23,814	\$25,174	\$23,530
San Benito	\$16,029	\$12,115	\$12,489	\$13,482
San Francisco	\$27,697	\$28,449	\$30,557	\$26,593
San Mateo	\$23,367	\$24,039	\$25,415	\$23,113
Santa Clara	\$22,035	\$22,664	\$22,504	\$19,900
Santa Cruz	\$17,710	\$17,740	\$19,367	\$17,834
Solano	\$12,881	\$10,955	\$16,262	\$15,033
Sonoma	\$18,517	\$20,462	\$18,821	\$18,762
County Average	\$20,448	\$20,582	\$22,336	\$18,862
California State	\$20,980	\$21,199	\$22,582	\$19,813

N/A - Not Available

All figures adjusted to 2001 dollars using the CPI-W index for the San Francisco-Oakland-San Jose County area

Source: County Business Patterns Annual (1998-2001), US Department of Labor, Bureau of the Census

Table A14: Employment in the construction industry, study area, 1998 to 2001

Area	1998	1999	2000	2001
Alameda	35,239	39,026	41,418	43,746
Contra Costa	20,865	22,522	25,159	26,485
Marin	5,815	6,892	8,254	9,110
Monterey	5,204	6,225	6,396	6,736
Napa	3,123	3,283	3,349	3,467
San Benito	1,112	1,234	1,342	1,381
San Francisco	18,731	21,119	23,928	24,382
San Mateo	18,508	19,070	21,924	24,758
Santa Clara	40,792	45,438	49,658	53,996
Santa Cruz	4,190	4,851	5,284	5,212
Solano	8,308	9,198	10,192	10,904
Sonoma	10,202	11,878	11,878	12,891
Study Area Total	174,087	192,735	210,782	225,069
California State	621,722	705,552	755,180	795,840

N/A - Not Available

Source: County Business Patterns Annual (1998-2001), US Department of Labor, Bureau of the Census

Table A15: Payroll per employee in the construction industry, study area, 1998 to 2001

Area	1998	1999	2000	2001
Alameda	\$52,279	\$50,360	\$52,903	\$48,831
Contra Costa	\$47,230	\$48,203	\$51,321	\$47,926
Marin	\$46,196	\$47,281	\$45,409	\$42,313
Monterey	\$40,054	\$36,652	\$37,523	\$31,723
Napa	\$39,405	\$40,772	\$40,902	\$42,170
San Benito	\$30,432	\$33,652	\$32,048	\$30,849
San Francisco	\$50,773	\$48,322	\$55,006	\$52,343
San Mateo	\$54,622	\$54,678	\$55,976	\$51,557
Santa Clara	\$51,792	\$50,702	\$55,176	\$49,665
Santa Cruz	\$39,407	\$37,711	\$38,259	\$36,950
Solano	\$39,170	\$41,555	\$43,854	\$40,385
Sonoma	\$40,909	\$40,646	\$41,595	\$39,196
County Average	\$44,356	\$44,211	\$45,831	\$42,826
California State	\$41,870	\$40,504	\$41,839	\$39,795

N/A - Not Available

All figures adjusted to 2001 dollars using the CPI-W index for the San Francisco-Oakland-San Jose County area

Source: County Business Patterns Annual (1998-2001), US Department of Labor, Bureau of the Census



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