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The Structure of the Retail and Service
Industries of Jefferson County

By

Steve Grabow, Steven Deller and Dennis Heling

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# AGRICULTURAL &

# APPLIED ECONOMICS

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# STAFF PAPER SERIES

# The Structure of the Retail and Service Industries of Jefferson County

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# Structure of the Retail and Service Industries of Jefferson County

## Steve Grabow, Steven Deller and Dennis Heling

## Executive Summary

The intent of this study is to review the current strengths and weaknesses of the retail and services industries of Jefferson County. We use historical data to look for overall trends and 2004 county sales tax data to provide detailed insights. Key findings and possible strategies include:

### *Key Findings*

Historical Context and Background

Research has shown that market size, measured most commonly by population, determines the level of retail and service activity. Growth in these markets hinges to a large extent on growth in population.

In addition to market size, or population, income is a major determinant of consumers' "ability to pay" within the market.

- Jefferson County's per capita income has historically lagged behind both the nation as well as Wisconsin.

- The 1990s, however, saw relatively strong growth in income for Wisconsin and Jefferson County. Despite remaining below the national average, the gap shrank significantly.

- Even though the analysis tells us real per capita income is growing both in Wisconsin and the nation the real per capita income is not growing as fast for Jefferson County over the past five years.

- The most recent data suggests that the County's recovery from the 2000-2001 recession has been modest. Based on the employment growth of the 1990s, the current economic recovery is modest, and again some may claim as being weak. The trends suggest that Jefferson County has only pulled even with the employment levels before the downturn in 2001. The most recent recession has been hard on Wisconsin and Jefferson County. Given the 2003 and 2004 employment data, the State and County's economies appear to be generating employment growth but at levels lower than what was experienced throughout the 1990s.

Historical Trends in Retail and Services

Manufacturing is the largest single source of employment in the County accounting for 24.5 percent of all jobs. The loss of manufacturing jobs in Jefferson County was a major explanation for only modest economic growth over the past few years.

Retail trade accounts for slightly more than 19 percent of total employment which is higher than the nation (16.1%) and Wisconsin (16.7%). Based on this simple measure retail seems to be a strength of the County. Services coupled with F.I.R.E. (Finance, Insurance and Real Estate) accounts for more total employment (28.1%)

■ The earnings level in the retail sector is relatively low (employment of 19.3 percent versus earnings of 10.3 percent). An alternative interpretation is that the retail sector is dominated by part-time jobs. The service sector also tends to have lower paying jobs on average (employment is 23 percent versus 19.5 percent for earnings).

■ Total employment growth in the retail sector for the nation between 1969 and 2004 is 106 percent, 79 percent for Wisconsin and 107 percent for Jefferson County.

■ The total employment growth in the service sector is very strong, but when Jefferson is compared to either the nation or Wisconsin, the growth is relatively modest.

■ When we look at service sector earnings there is remarkable growth in Jefferson County as well as the nation and Wisconsin. Most notable is the surge in the growth rate for Jefferson County during the period from 1997 to 2000.

■ When compared to employment growth this indicates that there has been tremendous growth in earnings per job in the service sector. This sector includes health care which is composed of highly paid medical specialists as well as low paid cleaning and food preparation staff.

■ Because retail and service employment is growing faster than total employment in Jefferson County, these two sectors are growing in importance to employment opportunities across the County.

Long-Term Trends by Retail Sector Store Types

Using estimates of annual sales for a number of retail sectors we uncovered a range of patterns.

■ The annual sales growth rate for Jefferson County during the 1990s was faster than either the nation or Wisconsin.

■ General Merchandise: For Jefferson County total sales in this classification of retail stores increased by 270 percent which is much higher than either the U.S. or Wisconsin. The primary reason for the growth in sales is the growing popularity of "big-box" general merchandise stores such as Wal-Mart, Target and ShopKo to name just a few.

■ Apparel and Accessories Store: Jefferson County apparel and accessories stores sales have declined steadily.. Several reasons could be advanced for the decline in sales in Jefferson County ranging from the clustering of these types of stores in urban centers such as Madison to the growing presence of general merchandise stores which offer these product lines. The reversal of the steady decline in apparel sales is likely explained by the opening of the Johnson Creek Premier Outlet Mall. The new Kohl's has also likely contributed to growth in sales.

■ Furniture and Home Furnishing Stores: Throughout the 1990s and up to 2004 a downward trend was reversed but the rate of growth still lagged behind the nation and Wisconsin.

■ Eating and Drinking Establishments: For Wisconsin and Jefferson County the growth has not been nearly as strong when compared to the nation. Given the strength of the tourism economy in Wisconsin coupled with strong linkage between tourism and restaurants, it is somewhat surprising that this has not been more of a growth sector in Wisconsin. Local community market analyses indicate that the demand may exist for these establishments in Jefferson County.

■ Miscellaneous Retail Sales: There has been remarkable growth in miscellaneous retail sales in the County. What we are seeing here is the introduction of Johnson Creek Premium Outlets and the over 60 name-brand outlet stores.

## Market Area Analysis

For the Market Area Analysis we use two sets of tools including Trade Area Analysis with measures of Pull Factors and Surplus/Leakage along with Firm Count Analysis where we compare and contrast the expected number of businesses with the observed.

■ *Trade Area Analysis: Pull Factors.* Consider first Pull Factors for retail sales that are subject to the county sales tax. Of the 14 retail sectors, only five have Pull Factors that are greater than one including automobile and other motor vehicle sales (PF=1.04), gasoline stations including include convenience store with gas (PF=1.26), clothing and accessories stores (PF=1.81), furniture and home furnishing stores (PF=1.11) and general merchandise stores (PF=1.11).

■ *Trade Area Analysis: Surplus/Leakage Dollar Values.* The Surplus values for automobiles and other motor vehicles is $4.7 million, and furniture and home furnishing stores have a Surplus of just over $9 million. The largest Surplus is for clothing and accessories stores at $23.9 million and is attributable to the Johnson Creek Mall and Kohl's Department Store.

■ Of the thirteen specific service categories only two have a Pull Factor greater than one: repair and maintenance services (PF=1.13) and real estate services (PF=5.25). Unfortunately, eleven of the thirteen taxable services have Pull Factors less than one suggesting that the County's service sector is not performing at the levels that we would expect.

■ The services sector that is losing the largest dollar volume is hotels and motels with a Leakage of $13.2 million. The development of motels near the Johnson Creek Mall is a reflection not only of the synergies created by the Mall itself, but also the market reacting to the large Leakage.

■ Business, personal and household services are all growth potential markets, and the level of Leakage suggests that this market is worth further analysis. Indeed, if the County is attempting to promote small business development either through entrepreneurship or the retention and expansion of existing small businesses, access to quality business services is important. Hence, the promotion of business services broadly defined will help not only address a Leakage within the County's market, but also provide positive spillover to other businesses within the County.

■ *Firm Count Analysis:* If the Pull Factor is greater than one and the observed number of firms is greater than that which is predicted by the statistical model, then one can conclude that this particular sector is a strength for the local market. There are four sectors that the Trade Area Analysis and Firm Count Analysis identified as "strengths" for the County including automobile and other motor vehicle firms, clothing and accessories stores, furniture and home furnishing stores, and finally general merchandise stores. In the prior Market Study in 1998, Jefferson County was significantly deficient in three of these sectors--the general merchandise, clothing/apparel/accessories and furniture/home furnishings. Since that time, the

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Johnson Creek Mall, Kohl's Department Store, Menard's, local furniture stores and the expanded Walmart in Watertown likely contributed to the turn-around in these retail sectors. Automobile and other motor vehicle firms continue to be a strength in Jefferson County.

■ There has been considerable discussion about the real need for new groceries and food service stores in the County. There have also been proposals for new groceries. The data would suggest that the food and beverage store sector is adequately serving the Jefferson County area.

■ If we turn our attention to the service sectors, we see that the vast majority of the categories examined can be described as experiencing Leakages (Pull Factor less than one) yet have more establishments than expected. The interpretation is that the existing firms are not capturing the full market potential.

■ There are only two sectors that exhibit both Leakages and fewer firms than expected; health care and social assistance services and architectural, engineering and related services. Given the relative strength of earnings growth in the service sector compared to employment growth, the level of pay within the service sector justifies paying particular attention to these types of firms.

## *Possible Jefferson County Strategies in Response to This Analysis*

a. *Respond to Key Findings: Determine opportunities identified in the "Key Findings" of this study. Agree upon areas to explore further.*

b. *Enhance Marketing and Local Market Analysis: Develop local marketing information, including the widespread sharing of this study, to help retail and service businesses in identifying market potentials and formulate business plans (e.g., the analysis presented in this study). Continue the community market analyses such as those in Waterloo and Watertown.*

c. *Enhance Promotions: Expand purchases by non-local people through appropriate advertising and promotions. This would include continued support for promotional activities such as the Art, Antiques and Gallery Tour brochure and the Jefferson County Official Guide.*

d. *Enhance Training and Business Development: Continue Jefferson County's efforts around business development. This includes the major initiatives such as the "First Step" program to provide counsel to new business or those looking for ways to enhance their business. Relatedly, the "Entrepreneurial and Inventors Connection" brings people together to network and to assist entrepreneurs in creating and pursuing creative business opportunities in both the retail and business sectors in Jefferson County.*

e. *Enhance Organizational Development and Planning: Encourage collective action through the strengthening or creating of organizations such as Main Street Programs, Chambers of Commerce, Tourism Councils, County Economic Development Consortium; etc.*

f. *Implement business retention, expansion and attraction program recommendations: Continue to implement recommendations in the Jefferson County Business Retention survey. This would include continuing efforts in workforce stabilization activities for the service and retail sector.*

# The Structure of the Retail and Service Industries of Jefferson County

## Steve Grabow, Steven Deller and Dennis Heling

### Introduction

Jefferson County has experienced significant change over the past several years. Growth pressure from both Dane County as well as Waukesha County, the success of Johnson Creek Premium Outlet Mall, and the introduction of "big-box" retailers to name but a few, is reflective of the dynamics of the County's economy. The recent recession, however, was hard on the Wisconsin economy and its manufacturing base in particular. Given the national recession and the modest recovery to date we want to review the current status of the Jefferson County economy with a focus on the retail and service industries. A similar study was conducted in 1998 so this represents an update report. It should be noted that, just as in 1998, the emphasis is on the service producing sector of the economy. This is not to imply that the goods producing sectors, including farming and manufacturing, are not important consideration in the Jefferson County economy.

In this study we will compile information from a variety of sources and present both descriptive as well as analytical date. Our primary source of data is the County Sales Tax Reports complied by the Wisconsin Department of Revenue. Jefferson County implemented the county optional sales tax in 1991 and in addition to providing revenues to county government and some property tax relief the tax data provides a rich source of information on the local retail and service market. Although the data is limited to sales and activities subject to the tax, it provides the most timely and comprehensive data available. We also use historical data complied by the US Department of Commerce and know as the BEA-REIS, or the Bureau of Economic Analysis, Regional Economic Information System.[1]

Beyond these introductory comments the study is composed of five parts. In the next section we review broad historical data and examine changes in population, employment and income from 1969 to 2004. Here we hope to establish a foundation to build the rest of our discussion. In the third section we focus more closely on the retail and service sectors by again looking at historical trends. In the fourth section of the study we use two separate sets of analytical tools to provide a detailed analysis of the strengths and weaknesses of the County's retail and service sectors. We close the study with a review of the key findings and outline some potential strategies that can be undertaken to build on market strengths and address market weaknesses. There is also a technical appendix in which we describe the analytical tools that we use in the analysis. While an appreciation of the limitations of the tools used is helpful, it is not necessary to review the technical appendix to gain insights offered in the study.

### Historical Context and Background

In order to have an appreciation of the current strengths and weaknesses of the Jefferson County retail and service industries it is important to gain an appreciation of the historical growth patterns of the County. For example, if the County's economy is growing slower than either the national or state economy it has ramifications on how local markets will be structured. In this

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[1] More specifically, we use an enhanced version of the BEA-REIS provided by Woods and Poole Economics, Inc of Washington DC. http://www.woodsandpoole.com/

section of the study we want to provide a broad overview of some simple historical trends with a focus on population, employment, income and retail sales.[2]

Consider first the growth in population for the County (Figure 1). Over the 35 year period we are examining (1969-2004) the first clear observation is that the growth in population for both Jefferson County and Wisconsin is lagging behind the national growth rate. From 1969 national population has increased by 45.8 percent to a total population of 296 million persons while Wisconsin's population has grown by only 25.9 percent to about 5.5 million. Jefferson County's population has increased by 32 percent to about 77,900 persons. While there was a noticeable jump between 1999 and 2000 growth over the past few years population growth has paralleled the state's growth.

These trends are important for two reasons, one political and the second economic. In a representative democracy the make-up of both congress and the state legislature hinges on population distributions. After the reapportions after the 2000 population census Wisconsin lost a representative in congress. The economic implications hinge on the changing demand for retail and service businesses. Research has shown that market size, measured most commonly by population, determines the level of retail and service activity. Growth in these markets hinges to a large extent on growth in population.

**Figure 1. Population Growth Index: (1969=100)**

Source: UW-Extension, Woods and Poole, Inc.
Department of Agricultural and Applied Economics, UW-Madison
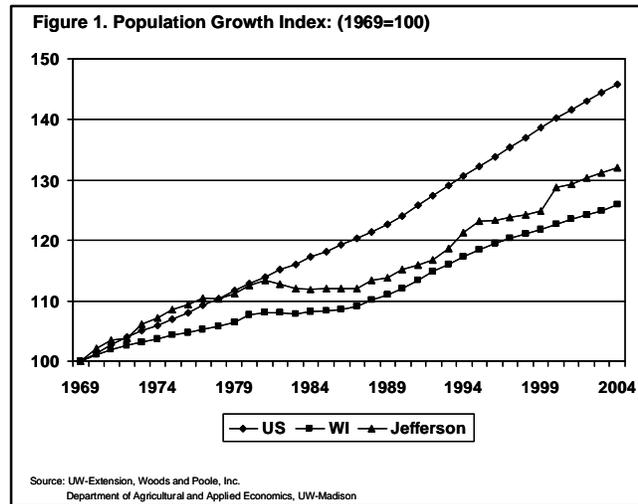
The second major indicator of regional economic growth is income. In addition to market size, or population, income is a major determinant of the consumers within the market "ability to pay." Market size speaks to the number of potential consumers and income speaks to the money at their disposal to spend.

If we look at a simple growth income, we see two things. First, other than a for a few short time periods, growth in real (i.e., adjusted for inflation) per capita income across the nation, Wisconsin and Jefferson County has tend to track closely to each other (Figure 2). Over the whole period, real per capita income grew by 101 percent for the nation, 100 percent for Wisconsin and almost 98 percent for Jefferson County. Second, the numerous recessions are clearly evident with the painful recessions of the early to mid-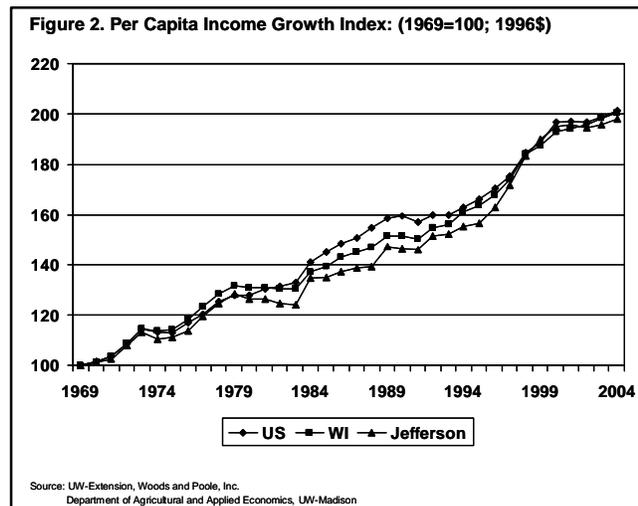1970s and the early 1980s particularly evident. Jefferson County was hit particularly hard during the 1980s recession with not only lower income but also population loss (Figure 1). More recently the strong growth of the mid- to late-1990s and the strong slowdown in the early-2000s is also clear. The most current data reveals a modest, and some may claim weak, recovery in income growth. One weakness of looking at just growth in per capita income (Figure 2) is that it lacks perspective on absolute levels. For example, per capita income in 1969, converted to 1996 dollars to adjust for inflation, was $14,210 for the U.S., $13,874 for Wisconsin, and only $13,389 for Jefferson County. Thus, although the overall growth rates outlined in Figure 2 are

**Figure 2. Per Capita Income Growth Index: (1969=100; 1996$)**

Source: UW-Extension, Woods and Poole, Inc.
Department of Agricultural and Applied Economics, UW-Madison

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[2] Ideally we would like to be able to look at service industry sales over time, but we lack sufficiently detailed data to provide that analysis.

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comparable, per capita income is below the national and Wisconsin average.   If we compute and visually analyze Wisconsin and Jefferson County per capita income as a percent of the national average we can gain better insights into the market buying potential (Figure 3).

Consider Wisconsin first; for only a three year period (1977-1979) was the state's per capita income equal or slightly above the national average.  The recession of the early to mid-1980s was very hard on Wisconsin and the absolute (Figure 2) and relative (Figure 3) levels decline did not reverse itself till the early 1990s.  Jefferson County's per capita income has historically lagged behind both the nation as well as Wisconsin.  In 1969 Jefferson County real per capita income was 5.8 percent below the national average and in 2004 it is now 7.3 percent below the

national average.  The largest gap between the national average and Jefferson County occurred in 1988 at 15 percent.  Again, the poor performance of the state's economy as well as Jefferson's during the 1980s is evident.  The 1990s, however, saw relatively strong growth in income for Wisconsin and Jefferson.  Despite remaining below the national average, the gap shrank significantly.   The past five years, however, has seen a widening of the income gap; while Wisconsin continues to narrow the gap Jefferson County is falling behind. While the analysis in Figure 2 tells us real per capita income is growing, the analysis presented in Figure 3 makes it clear that the growth for the County is not as fast as either the nation or Wisconsin.



Figure 3. Per Capita Income as a Percent of the U.S. (1996$)

Source: UW-Extension, Woods and Poole, Inc.
        Department of Agricultural and Applied Economics, UW-Madison
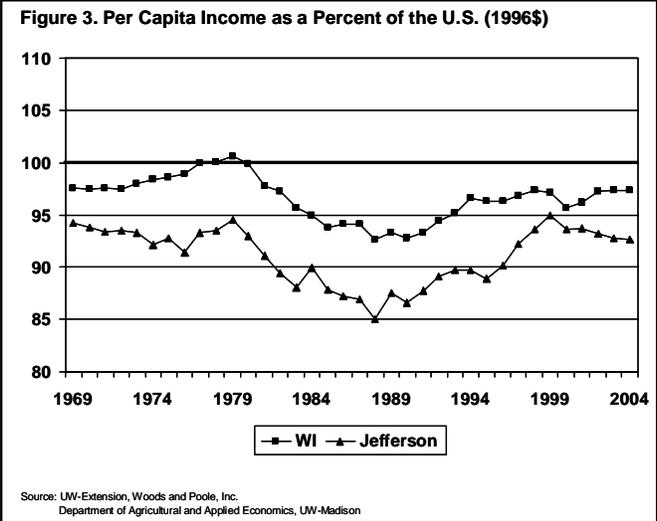
Our third measure of economic growth is employment (Figure 4).  Much like real per capita income, growth in total employment across the nation, Wisconsin and Jefferson Count closely track each other.  Over the whole time period total employment has grown in the U.S. by 89 percent, about 80 for Wisconsin, and slightly more than 83 percent for Jefferson County.

The recessions are clearly evident and the severity of the early 1980s is particularly clear.  The early 1990 recession is interesting for Wisconsin and Jefferson County in that, from a jobs perspective, there is little evidence of a recession. Although there is evidence of a slowdown in terms of per capita income (Figure 2), the employment data suggests that the national recession of the early 1990s was not a factor for Wisconsin.  This begs the question: why was Wisconsin hit so hard in the early 1980s recession but was barely touched in the early 1990s recession?
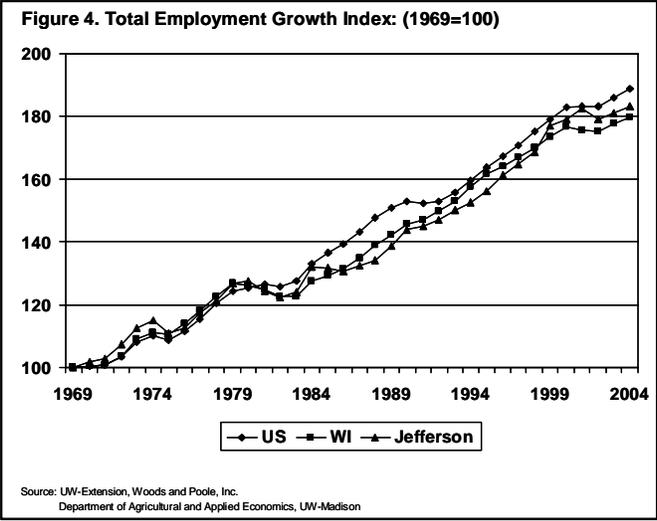
The most recent recession has been harder on Wisconsin and Jefferson County.  While the nation experienced flat job growth from 2000 to 2002, Wisconsin and Jefferson experienced declines in employment levels.  Given the 2003 and 2004 employment data, the State and



Figure 4. Total Employment Growth Index: (1969=100)

Source: UW-Extension, Woods and Poole, Inc.
        Department of Agricultural and Applied Economics, UW-Madison

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County's economies appear to be generating employment growth but at levels lower than what was experienced throughout the 1990s. Based on the employment growth of the 1990s, the current economic recovery is modest, and again some may claim weak. The trends suggest that Jefferson County has only pulled even with the employment levels after the downturn in 2001.

It is possible that many firms in Jefferson County have weathered these downturns, and a lesson that could be learned by the existing businesses is one of cautiousness and recognition about the importance of not over-extending or over-expanding.

Our final measure of broad economic growth is to examine trends in earnings (Figure 5). Total personal income, which we use to compute per capita income in Figure 2, is composed of numerous parts including wage and salary income that flows from employment, proprietor's income which can be thought of as retained profits from small businesses, dividend, interest and rent payments, and transfer payments including government support programs and social security payments. In today's economy, wages and salaries remains the primary source of income but it is shrinking. In Jefferson County income from labor accounts for 58.2 percent of total income and for the nation it is 67.6 percent. Income from investments, or dividend, interest and rent payments, accounts for 16.6 percent of total income for Jefferson and 17.3 percent for the U.S. Transfer payments to individuals are the same for both Jefferson and the nation at about 14.5 percent. From an economic growth and development perspective, if a goal of policy is to enhance income levels, looking to simply employment opportunities is too narrow. Indeed, as the baby-boomer generation enters retirement, the share of total income from employment is going to decline significantly.[3]

But by comparing employment and earnings we can gain additional insights into economic well-being. During modest economic fluctuations firms are likely to maintain absolute employment levels but alter the number of hours worked. This type of behavior is unlikely to show up in employment data and could be masked in total income (per capita income) data, but will be apparent in earnings data. Between 1969 and 2004 total earnings for the U.S. increased by 167 percent, 133 percent for Wisconsin and 134 percent for Jefferson County (Figure 5). Focusing on the most current five year period, a couple patterns are worth noting. First, growth rates for Wisconsin and the County lag behind the nation. Second, in terms of earnings the Wisconsin economy appears to have weathered the most recent recession quite nicely. Third,



**Figure 5. Total Earnings Growth Index: (1969=100; 1996$)**

Source: UW-Extension, Woods and Poole, Inc.
Department of Agricultural and Applied Economics, UW-Madison

Jefferson County was affected by the recession much harder than either the nation or Wisconsin. While it is difficult to tell from the figures, the growth rates for the most recent two years is slower for Wisconsin and the County than the nation. This again points to the notion that the current economic recovery is modest. If we compare total employment growth to total earnings growth we can see that total earnings are growing much faster than total employment, even after adjusting for inflation. This points to the primary driver of growth in per capita income. While we note that wages and salaries, or earnings, is about 60 percent of total income for the

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[3] This observation speaks directly to the long-term solvency issue of Social Security; will there be a sufficient number of workers paying into Social Security to cover the benefits of retirees? Given current trends, the answer is "no" and the debate centers on when the system will lose its solvency in the 2042 to 2052 window.

County, the strong growth in earnings is pulling per capita income upward.  These data strongly suggest that wages and salary per job is growing nationally and in the County.[4]

In the light of all the indicators presented in Figures 1 through 5, we can conclude that the County is not experiencing strong economic growth, but only modest.  Although there have been short historical periods where the County has grown faster than either the nation or the State, the overall pattern is one of growth on par with Wisconsin overall.  The most recent data suggests that the County's recovery from the 2000-2001 recession has been modest.

Jefferson County has historically been a strong "manufacturing" county. Over the past few years, several major employers have either gone out of business or substantially reduced their workforce. Over 700 manufacturing jobs were lost in the printing and furniture manufacturing industries during a six month period in 2003.

These observations have large implications for economic development and growth policies for the County as well as the municipalities that make up the County.  One way of looking at the past few years is that despite major manufacturing job losses, Jefferson County has still had modest growth. Given these dynamics, what is an appropriate level of growth in Jefferson County? While population and employment growth is on par with the State, Jefferson County's overall income levels continue to lag behind.  Another consideration is, given the County's location between two growing metropolitan areas, are there economic opportunities that the County is overlooking?

## Historical Trends in Retail and Services
As outlined in the introductory comments to this study we outlined the primary objective as being focused on the retail and service industries within the County.  We begin our analysis by exploring the relative importance of the retail and service industries to the County's economy. We then look at employment and earning trends in retail and services.  We close this section of the study with a brief discussion of historical growth patterns in a range of retail sectors.

Thinking in the broadest sense we can classify the different sectors of the economy into two broad classifications: goods and services producing sectors.  Goods producing sectors include manufacturing, construction, agriculture and to a limited extent mining.  The service producing sectors include wholesale and retail trade, transportation and communication services, finance, insurance and real estate services, business and personal services, and the

**Figure 6a. Distribution of Employment Across Goods Producing Sectors: 2004**

MANUFACTURING

CONSTRUCTION

MINING

AGRICULTURAL SERVICES, OTHER

FARM

0%   5%   10%   15%   20%   25%   30%

☐ US  ◼ WI  ◼ Jefferson

Source: UW-Extension, Woods and Poole, Inc.
Department of Agricultural and Applied Economics, UW-Madison

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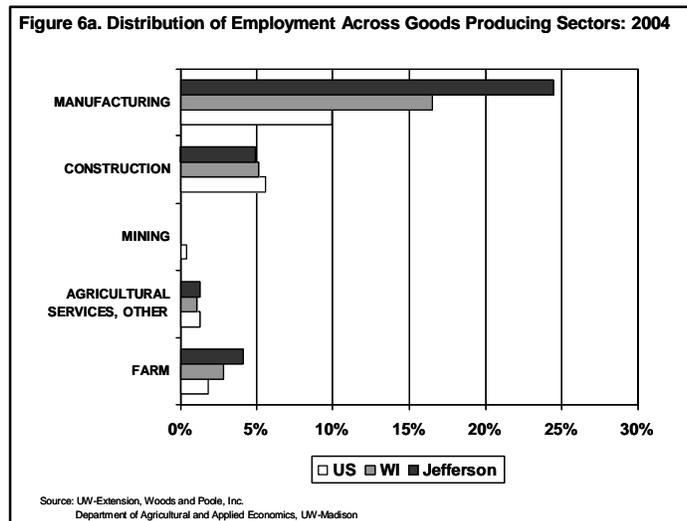
[4] We do *not* address the issue of income distribution in this study.  Income distribution speaks to the "spread of the distribution around the mean" and in this case the mean is per capita income or earnings per job.  There is significant evidence that the income distribution is widening with more people in the upper and lower income levels.  Put another way, the middle class is "hollowing out".  For those interested in reading more, please see the June 2002 issue of Community Economics at http://www.aae.wisc.edu/pubs/cenews/docs/ce308.txt as well as the June 2005 issue at http://www.aae.wisc.edu/pubs/cenews/docs/ce344.pdf .

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government sector.  We will consider the employment first and then earnings.

Manufacturing is the largest single source of employment in the County accounting for 24.5 percent of all jobs (Figure 6a).  Manufacturing accounts for only 16.5 percent of Wisconsin's employment and at the national level, manufacturing accounts for slightly less than 10 percent.  Construction accounts for about five percent and there is little variation across the County, State and nation.  Agriculture contributes about four percent of total employment which is higher than Wisconsin or the US.

**Figure 6b. Distribution of Employment Across Service Producing Sectors: 2004**

Source: UW-Extension, Woods and Poole, Inc.
Department of Agricultural and Applied Economics, UW-Madison

If we look at earnings, we see a similar picture, but some valuable insights are gained (Figure 7a).  By comparing the share of employment to the share of earnings one can deduce the level of pay within each sector.  Consider, manufacturing accounts for 24.5 percent of employment, but 36.2 percent of earnings.  On its face value, this suggests that the pay level in manufacturing in the County is relatively high.  At the same time, a similar comparison for farming suggests that jobs on farms pay relatively low.[5]
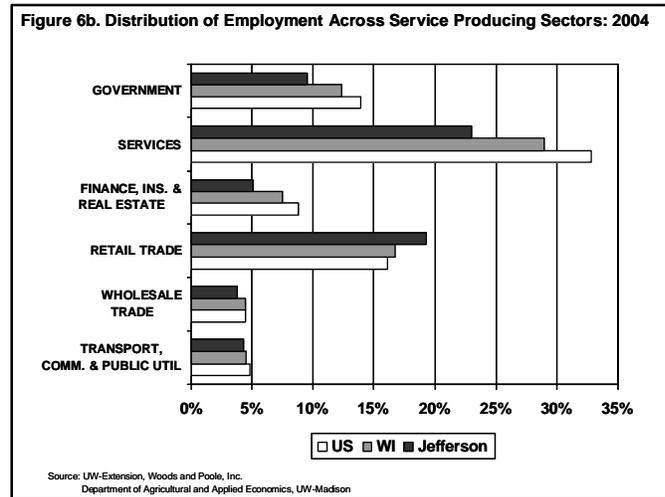
The question that needs to be addressed is whether this disproportionate dependency on manufacturing for employment is a strength or a weakness, a threat or an opportunity.  A strength comes in the form of high wages paid and perhaps a critical mass of manufacturing to build upon (i.e., opportunity).  The weakness is that from a national perspective manufacturing is *not* a growth industry and is indeed declining.
The threat may take the form that manufacturing is very sensitive to changes in the national business cycle and high dependency on manufacturing implies an unstable economy.
The last section clearly indicated the impacts in Jefferson County from having a high proportion of employment and earnings in the manufacturing sector.  The loss of manufacturing jobs in Jefferson County was a major explanation for only mode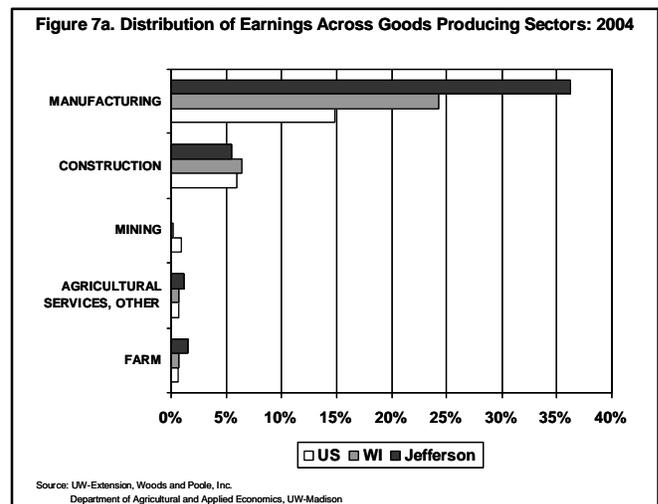st economic growth over the past few years. While these are all important considerations, manufacturing is not a focus of this study and may warrant a separate study in the future.

**Figure 7a. Distribution of Earnings Across Goods Producing Sectors: 2004**

Source: UW-Extension, Woods and Poole, Inc.
Department of Agricultural and Applied Economics, UW-Madison

If we turn to the service producing sectors, we see that in terms of whole trade and transportation, communications and utilities, the share of total employment for Jefferson County is about the same as the nation and Wisconsin, each slightly less than five percent. The public sector, which is dominated by state and local government including K-12 public schools, accounts for only 9.5 percent of employment in Jefferson County and 12.3 percent for Wisconsin and 13.9 percent of national employment.  The smaller public sector employment across Wisconsin, including Jefferson, is partially explained by the lack of any real military presence in the state.  This result partially challenges the idea that

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[5] The reader must keep in mind that much of income paid to farmers comes in the form of proprietors' income rather than earnings.

the public sector is "too big" in Wisconsin.[6]  If we look at the comparative earnings levels and apply the same logic we used when discussing manufacturing we see that wages tend to be higher in transportation, communications and utilities, wholesale trade and the public sector (Figure 7b).

Overall Trends

Retail trade accounts for slightly more than 19 percent of total employment which is higher than the nation (16.1%) and Wisconsin (16.7%). Based on this simple measure retail seems to be a strength of the County.  Finance, insurance and real estate, often labeled F.I.R.E., accounts for five percent of employment in Jefferson County, but 7.5 percent for Wisconsin and 8.8 percent for the U.S.  The specific classification of services (business and personal) accounts for 32.8 percent of total employment, which at the national level, is more than all the goods producing sectors combined, 29 percent of employment for Wisconsin and 23 percent of the County's.  Even with Jefferson County's high dependency on manufacturing for employment (24.5%), services coupled with F.I.R.E. accounts for more total employment (28.1%)

**Figure 7b. Distribution of Earnings Across Service Producing Sectors: 2004**

Source: UW-Extension, Woods and Poole, Inc.
Department of Agricultural and Applied Economics, UW-Madison
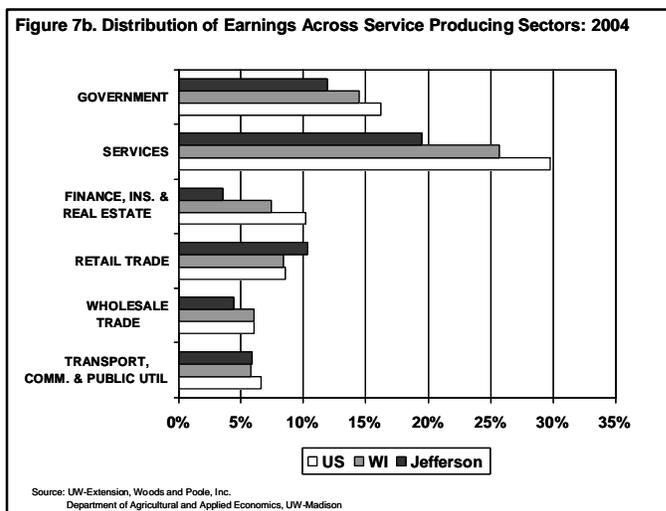
Turning to earnings for the broad category of service producing sectors two observations warrant discussion (Figure 7b). First, for the pattern of earnings shares across the classifications of service producing industries as well as across the nation, Wisconsin and the County follows closely that of employment.  Second, and more important, is the share of earnings relative to employment.  For the County the public sector accounts for 9.5 percent of all jobs but 11.9 percent of earnings. The simplest interpretation is that public sector jobs tend to pay a bit better on average.  Applying the same simple logic to retail we can deduce that the earnings level in the retail sector is relatively low (employment of 19.3 percent versus earnings of 10.3 percent). An alternative interpretation is that the retail sector is dominated by part-time jobs.  The service sector also tends to have lower paying jobs on average (employment is 23 percent versus 19.5 percent for earnings).

**Figure 8a. Retail Employment Growth Index: (1969=100)**

Source: UW-Extension, Woods and Poole, Inc.
Department of Agricultural and Applied Economics, UW-Madison

If we look at growth in the retail and service sectors a handful of important patterns become apparent.  First we will describe these growth trends and then discuss some of the more relevant implications.   Total employment growth in the retail sector for the nation between 1969 and 2004 is 106 percent, 79 percent for Wisconsin and 107 percent for Jefferson County (Figure 8a). This is only slighter faster employment growth then total employment growth.  Two simple observations: 1) the retail sector is sensitive to

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[6] For a more detailed discussion of public sector employment in Wisconsin and how the state compares to other states please see "Employment Trends in the Public Sector by S.C. Deller and C. Maher, Department of Agricultural and Applied Economics Staff Paper No. 474, May 2004, University of Wisconsin-Madison at http://www.aae.wisc.edu/pubs/sps/pdf/stpap474.pdf.
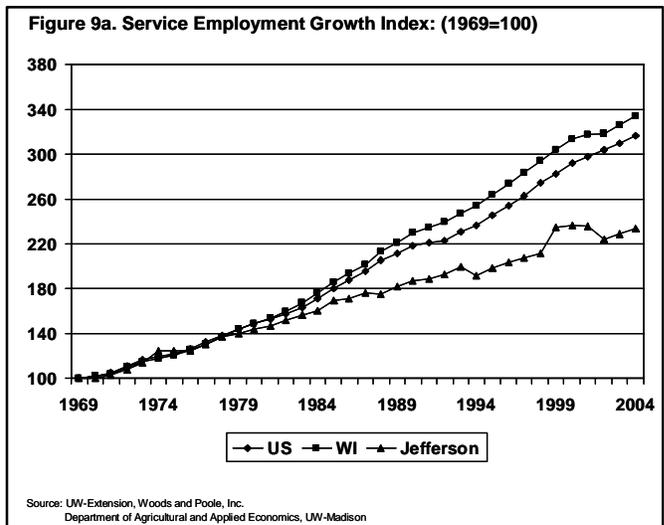
the overall business cycle and 2) the establishment of the Johnson Creek Premium Outlet Mall, which opened its first phase in May 1998 and the second phase in June of 1999. All of this is evident in the employment data. The trend of growth is further attributed to a new Kohl's Department Store and Menard's in Johnson Creek.

Earning growth in the retail sector follows closely that of employment except that the dips during economic recessions are more pronounced. Given that retail employment in the County grew by 107 percent real (i.e., adjusted for inflation) earnings grew by 96 percent. This suggests that earnings per job in retail has not changed over the past 35 years; workers in retail today earn the same, adjusted for inflation, as those retail workers earned in 1969.

When we look at services (business and personal) we see a very different picture than when compared to retail. For the nation, service sector employment grew by 216 percent over the 35 year time period examined, and for Wisconsin service sector employment grew by 234 percent, but for Jefferson County it grew by only 133 percent (Figure 9a). The total employment growth in the service sector is very strong, but when Jefferson is compared to either the nation or Wisconsin, the growth is remarkably modest. This raises a natural question; if the service sector is such a strong source of employment growth for the U.S. and Wisconsin, why is Jefferson County lagging behind?

When we look at service sector earnings there is remarkable growth in Jefferson County as well as the nation and Wisconsin (Figure 9b). From 1969 to 2004 total real earnings increased 420 percent nationally, 379 percent for Wisconsin and 410 percent for Jefferson County. Most notable is the surge in the growth rate for Jefferson County during the period from 1997 to 2000.

When compared to employment growth this indicates that there has been tremendous growth in earnings per job in the service sector. It is important to temper this observation by noting that there are wide ranges in earnings across the services sector. This sector includes health care which is composed of highly paid medical specialists as well as low paid cleaning and food preparation staff.

**Figure 8b. Retail Earnings Growth Index: (1969=100; 1996$)**

Source: UW-Extension, Woods and Poole, Inc.
Department of Agricultural and Applied Economics, UW-Madison

**Figure 9a. Service Employment Growth Index: (1969=100)**

Source: UW-Extension, Woods and Poole, Inc.
Department of Agricultural and Applied Economics, UW-Madison

**Figure 9b. Service Earnings Growth Index: (1969=100; 1996$)**

Source: UW-Extension, Woods and Poole, Inc.
Department of Agricultural and Applied Economics, UW-Madison

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Beyond the significant growth in employment in the service sector along with the growth in earnings levels, one important dimension to the service sector is its apparent insensitivity to the overall business cycle. Unlike manufacturing, retail employment levels in services show little evidence of recessions. Wisconsin and Jefferson County were hit particularly hard during the recession of the early to mid-1980s. But employment in the service sector seems to have been unaffected by that recession. When we look at the earnings data for recessions, there appears to be only a slight reduction in the rate of growth. Only Jefferson County during the most recent recession showed any indications of weakness in the services sector.

Because retail and service employment is growing faster than total employment in Jefferson County, these two sectors are growing in importance to employment opportunities across the County. The service sector in particular is exploding in terms of both employment and earnings. But, growth in the service sector in Jefferson County is lagging behind both the nation and Wisconsin. Because the growth rate in service earnings in Jefferson County is on par with the nation and Wisconsin, but the employment growth is slower than either, this implies that the job growth in the service sector are paying particularly high wages.

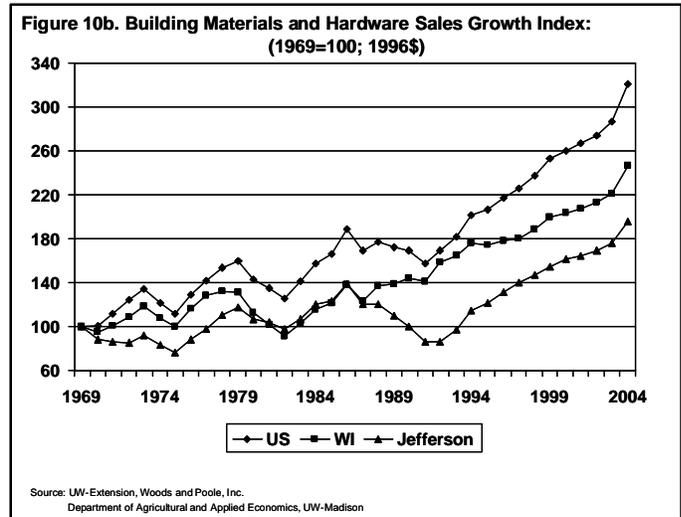Long-Term Trends by Retail Sector Store Types
In addition to employment and earnings data we also have estimates of annual sales for a number of retail sectors. This data is drawn from Woods and Poole, Inc. located in Washington DC (see footnote No. 1). Woods and Poole build their retail sales data base off of the Census of Retail that is conducted every five years (years ending in a two or a seven, 1997, 2002, etc). Using various methods they then estimate the values between the Census years. While looking at any particular year other than a Census year is in essence looking at an estimate, over the whole of the 35 year period general patterns can be uncovered. Using these data we provide growth indices for total retail (Figure 10a) and eight categories of retail businesses (Figure 10b through 10i). As with the per capita income and earnings data the retail sales data used here are adjusted for inflation and are in 1996 dollars.

**Figure 10a. Total Retail Sales Growth Index: (1969=100; 1996$)**



Source: UW-Extension, Woods and Poole, Inc.
Department of Agricultural and Applied Economics, UW-Madison

While these historical trends are helpful in understanding how we came to be in our current position, future economic policies need to focus on more current trends. The question is what a reasonable timeframe to consider is; what defines current, two, five, ten years? Theory does not really provide us with any insights and community economic development practitioners differ in their opinions. Complicating the answer to this question is that the appropriate timeframe is likely to vary by type of store classification considered. We do not offer a working definition of "current" and allow the reader to use their own judgment and insights into the County's economy to determine what the appropriate timeframe to consider is.

Total retail sales experienced significant and almost uninterrupted growth from the end of the 1990-1991 recession. While there is evidence of a slow down in total retail sales during the most recent recession, there was not actual downturn in sales. From 1969 to about 1991 growth in retail sales in Jefferson County was relatively modest with total sales increasing by only about 20 over the whole of the period. The vast majority of the overall growth of 117 percent between 1969 and 2004 occurred during the 1990s. Indeed, the growth rate during the 1990s was faster than either the nation or Wisconsin.

The performance of building material and hardware stores are often tied to the construction economy which in turn is tightly linked to the performance of the overall economy.  When we look at sales in this category we can see the strong ties to the periods of economic growth and recession (Figure 10b).  As with total sales, the bulk of the growth in this sector has occurred during the 1990s and the recent boom in the housing market.[7]  Record low interest rates have fueled the boom in not only new construction but also remodeling of existing homes.  Between the low in 1992 and currently, sales in this category increased in Jefferson County by almost 90 percent.  Also note that the growth rate in Wisconsin and the County during this period is slower than the national growth rate.  This is part a reflection of slower overall population growth and also rapid growth in certain parts of the nation such as the coastal areas of the Carolinas and other southern states. It can be pointed out that Jefferson County did have a significant rate of growth in 2003 which in part could be explained by the new Menard's in Johnson Creek.

**Figure 10b. Building Materials and Hardware Sales Growth Index: (1969=100; 1996$)**

Source: UW-Extension, Woods and Poole, Inc.
Department of Agricultural and Applied Economics, UW-Madison

General merchandise is a classification of stores that has experienced rapid growth across the U.S., Wisconsin and Jefferson County (Figure 10c).  For Jefferson total sales in this classification of retail stores increased by 270 percent which is much higher than either the U.S. or Wisconsin.  The reasoning for the decline between 1990 and 1994 is not readily clear and it may be a function of how the data is constructed (see footnote No. 7).  The primary reason for the growth in sales is the growing popularity of "big-box" general merchandise stores such as Wal-Mart, Target and ShopKo to name just a few.  In addition to aggressive business plans that focus on expansion, these types of stores are very popular with customers.  In a sense these types of store represent the embodiment of "one-stop-shopping".  While there may be strong local opposition to the specific location decisions of these types of stores, the market forces are such that it is a strong growth sector.

**Figure 10c. General Merchandise Store Sales Growth Index: (1969=100; 1996$)**

Source: UW-Extension, Woods and Poole, Inc.
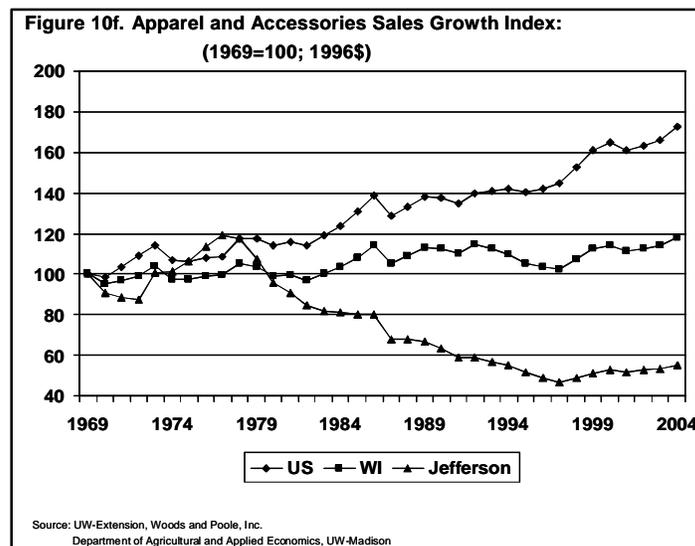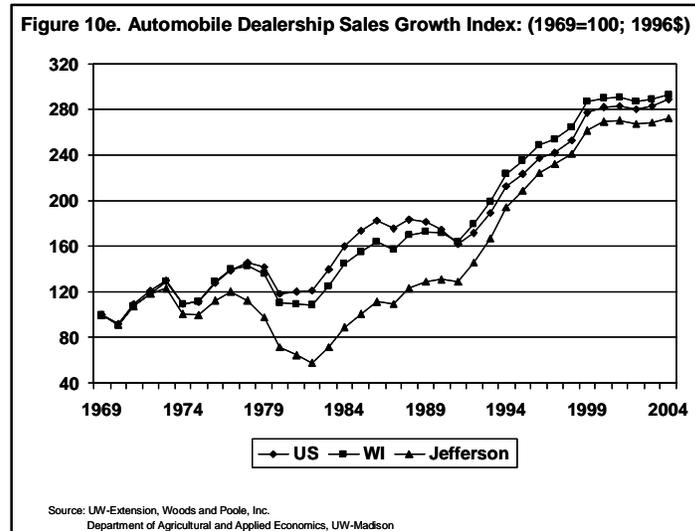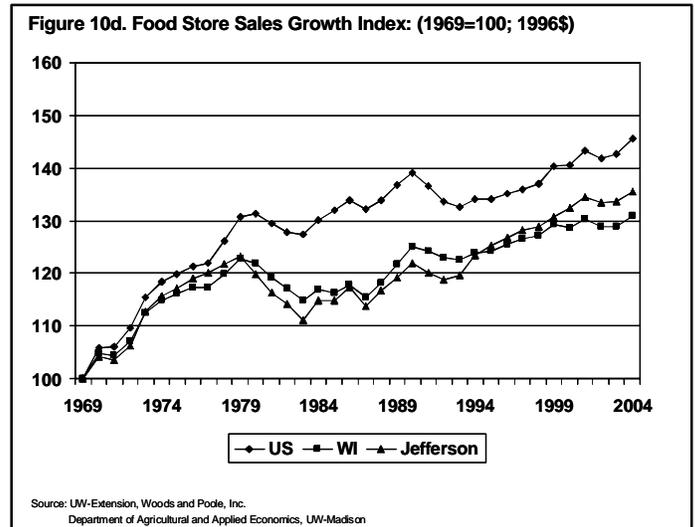Department of Agricultural and Applied Economics, UW-Madison

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[7] Care must be taken with interpreting the apparent jump in sales in 2004.  The reader must keep in mind that these data are based on the Census which was last taken in 2002.

Food store sales are tracked and reported in Figure 10d. For all three levels that we look at, national, state and local, food store sales has not experienced significant growth. National, food store sales has increased only 45.6 percent and only 35.5 percent in Jefferson County which tracks growth in population (Figure 1) very closely. This latter observation makes sense given the demand structure for food stuffs. It is widely accepted within economics that once a certain income level is achieved, growth in food sales is a reflection of growth in population. In addition, as we will see later, there is also an important dynamics in terms of dining out that impacts food store sales.

Auto sales have also been relatively significant over the period examined (Figure 10e). From 1969 to 2004 auto sales through dealerships in the nation have increased by 189 percent, 193 percent for Wisconsin and 172 percent for Jefferson County. Unlike sales in grocery stores which is not tied to income levels, auto sales is more sensitive to income; as income increases people are willing to spend increasingly levels of income on cars and trucks. At the same time auto sales are very sensitive to the business cycle. The lack of growth over the five year period from 2000 to 2004 is partially explained by the recession and also the aggressive price incentive programs companies have put in place to maintain sales levels.

Apparel and accessories store sales has shown growth from a national perspective (72.7%), but only about 18 percent and actual declines in Jefferson County (Figure 10f). Since about 1997 the downward trend has stopped and sales have been modestly increasing in the County. Several reasons could be advanced for the decline in sales in Jefferson County ranging from the clustering of these types of stores in urban centers such as Madison to the growing presence of general merchandise stores which offer these product lines. The reversal in the steady decline in apparel sales is likely explained by the opening of the Johnson Creek Premier Outlet Mall. The new Kohl's has also likely contributed to growth in sales.

Growth indices in furniture and home furnishing store sales are provided in Figure 10g. While there



Figure 10d. Food Store Sales Growth Index: (1969=100; 1996$)

Source: UW-Extension, Woods and Poole, Inc.
Department of Agricultural and Applied Economics, UW-Madison



Figure 10e. Automobile Dealership Sales Growth Index: (1969=100; 1996$)

Source: UW-Extension, Woods and Poole, Inc.
Department of Agricultural and Applied Economics, UW-Madison



Figure 10f. Apparel and Accessories Sales Growth Index: (1969=100; 1996$)

Source: UW-Extension, Woods and Poole, Inc.
Department of Agricultural and Applied Economics, UW-Madison

has been fairly strong growth in this sector across the nation and Wisconsin (185% and

146%, respectively), Jefferson County experienced a general downward trend in sales in this sector from 1969 till about 1992. Throughout the 1990s and up to 2004 the downward trend was reversed but the rate of growth still lagged behind the nation and Wisconsin. Indeed, over the entire time period retail sales in furniture and home furnishing stores increased only 38.4 percent in Jefferson County. The data presented here is not sufficient to help us understand what caused this reversal in the trends. Finally, like many of the other sectors we have looked at in terms of historical sales data, furniture and home furnishing stores is sensitive to the business cycle. A local example includes the observation that Keck's furniture store in Watertown has remained locally controlled and operated for over 100 years.

**Figure 10g. Furniture and Home Furnishings Sales Growth Index: (1969=100; 1996$)**



Source: UW-Extension, Woods and Poole, Inc.
Department of Agricultural and Applied Economics, UW-Madison
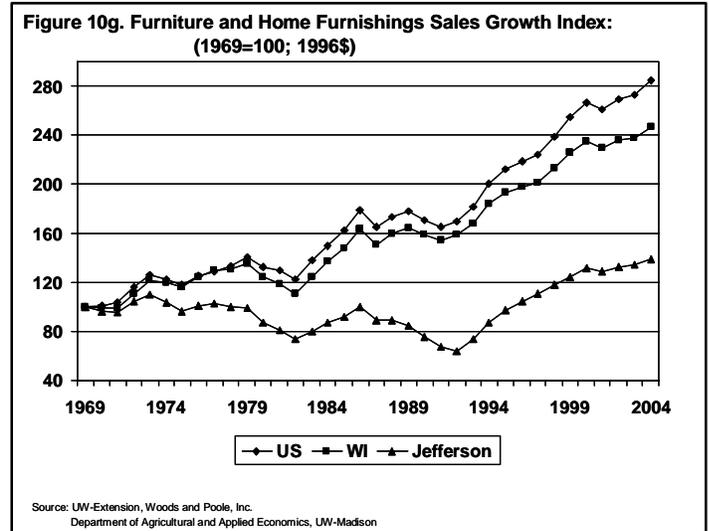
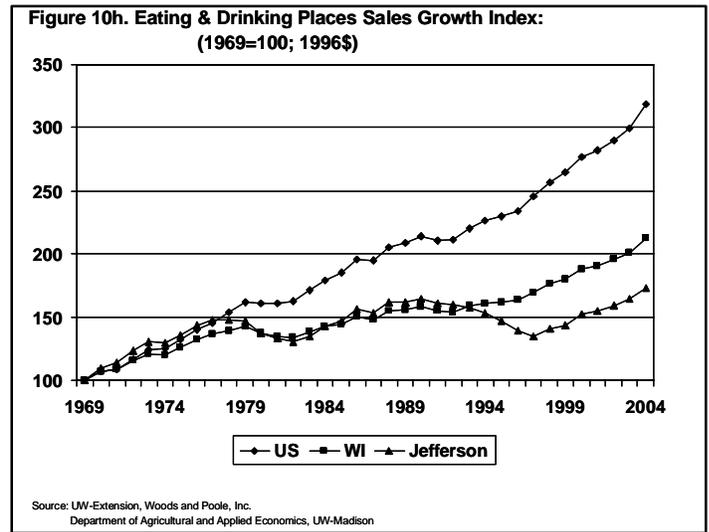Eating and drinking establishments (restaurants and taverns) have experienced significant growth at the national level with sales increasing by 219 percent over the 35 year period (Figure 10h). Changing dynamics of family structures coupled with increasing income have generally been offered as reasoning for this rapid growth. This includes an increase in the number of single parent households, households where both parents work allowing the "luxury" of dining out or purchasing prepared meals for consumption at home (e.g., fast food) and lifestyle situations which suggest these changes as both a necessity as well as a convenience. This fundamental shift away from buying food stuffs and preparing meals to dining out (or carry out) helps explain in part why growth in food store sales has been so modest. Indeed, if one considers the product lines for many grocery stores there has been a shift away from food stuffs used to prepare meals to pre-prepared meals. These can take the form of frozen foods or expanded deli services.

**Figure 10h. Eating & Drinking Places Sales Growth Index: (1969=100; 1996$)**



Source: UW-Extension, Woods and Poole, Inc.
Department of Agricultural and Applied Economics, UW-Madison

For Wisconsin and Jefferson County the growth has not been nearly as strong when compared to the nation. Given the strength of the tourism economy in Wisconsin coupled with strong linkage between tourism and restaurants, it is somewhat surprising that this has not been more of a growth sector for Wisconsin. Also of particular interest is the significant decline in eating and drinking places sales during much of the early and mid-1990s in Jefferson County. This trend is surprising given that during this period Jefferson County experienced solid population and income growth. Local community market analyses indicate that the demand may exist for these establishments in the County.

The final category of retail sales for which we have long-term historical data is broad classification of miscellaneous retail sales (Figure 10i). This could be called a "default" category which includes stores that do not clearly fit into the other classifications. Since the about 1987 this has been a strong growth sector for the nation and Wisconsin, but a declining sector for Jefferson County. Throughout the early 1990s, however, there has been remarkable growth in miscellaneous retail sales in the County. What we are seeing here is the introduction of Johnson Creek Premium Outlets



Figure 10i. Miscellaneous Retail Sales Growth Index: (1969=100; 1996$)

Source: UW-Extension, Woods and Poole, Inc.
Department of Agricultural and Applied Economics, UW-Madison

and the over 60 name-brand outlet stores. Indeed, the Outlets mall has become an anchor for additional development within Johnson Creek. As with any large retail mall development there will be any number of "spin-off" types of establishments including restaurants, gasoline service stations and hotel/motels. A changing dynamic of family structures has seen large shopping malls become destinations for weekend shopping trips. Families will make an "outing" of the weekend involving shopping, a restaurant meal and an evening at a hotel with a pool for the children. Additional development might include other recreational activities such as a movie theater.
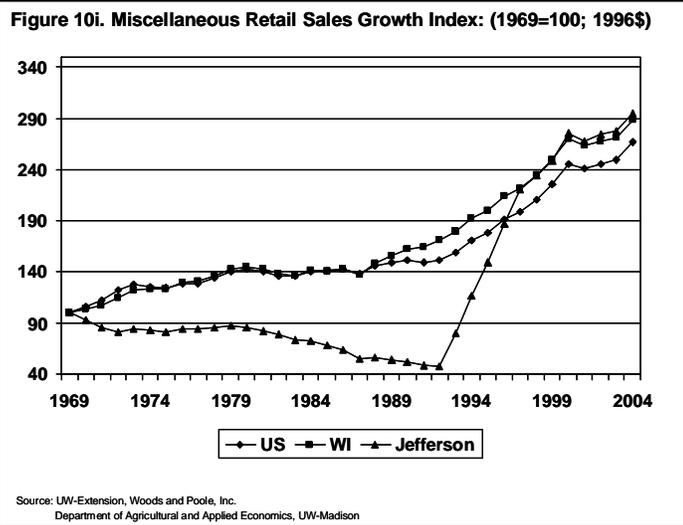
## Market Area Analysis

A central focus of this study is to analyze the strength and weaknesses of Jefferson County's current retail and service markets within the context of the historical analysis. To do this we use the data complied from the county option sales tax. One of the advantages of having a local sales tax is that it provides a rich source of data for analysis. For this study, we use the County Sales Tax Report data provided by the Wisconsin Department of Revenue. Data are for 2004 and represent the best secondary source of retail and service level data available. But as with any secondary data source there are limitations. For this data we are limited to the county as the unit of analysis. In addition, we only have data on sales that are subject to the sales tax. Here some caution must be taken. Food, for example, is taxable in some circumstances, but not in others. If you purchase the raw products to make a salad, the items are not taxable, but if you purchase a pre-prepared salad for immediate consumption, then the items are taxable. Despite these significant limitations, sales tax data are the best single source of retail and service activities.

For our analysis here we use two specific sets of analytical tools: (1) Trade Area Analysis (TAA) and (2) Firm Count Analysis (FCA).[8] Here we use observed retail sales as well as the number of establishments along with the socioeconomic characteristics of the County to compare and contrast "potential" levels of activity with observed. If observed level of activity (retail sales and/or number of establishments) is greater than the estimated potential, the sector is said to be a strength for the County. If the observed level is below the estimated potential, the sector is said to be a weakness. First we will discuss the results of the Trade Area Analysis, second the Firm Count Analysis and finally will draw inferences when both approaches are considered simultaneously.

For the Trade Area Analysis we will focus on two specific measures: Pull Factors and Surplus/Leakage. The Pull Factor is a simple indicator that centers on one with an estimated value greater than one indicating that the sector is a strength for the County and a value of less than one indicates a weakness. The traditional interpretation is that a Pull Factor greater than

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[8] A detailed discussion of both methods is provided in the Technical Appendix to this report. More detailed discussions are available in Deller, Kures and Ryan (2005a and 2005b).

one indicates that customers are being "pulled" into the market and less than one local customer is leaving the market to shop elsewhere.  The measure of Surplus/Leakage is an estimate of the dollar value of the Pull Factor being greater or less than one.  For example, if a Pull Factor is .7 the corresponding loss, or Leakage, in sales might be a million dollars.  The question then becomes one of whether or not the Leakage is sufficient to support new investments in that particular sector.

In addition to using the benchmark of a Pull Factor equal to one, and the corresponding Surplus/Leakage equal to zero, we compare and contrast Jefferson County to three counties including Columbia, Walworth and St. Croix.  The first two where selected because of their proximity to Jefferson County but more importantly their similarity in terms of population and spatial location to major metropolitan markets.  Columbia County is experiencing growth pressures from Madison and Dane County while Walworth County is experiencing growth pressure from the Chicago and Milwaukee metro areas.  One limitation of using Columbia and Walworth Counties for comparison is that any common weaknesses might be due to their proximity to Milwaukee and Madison and not to inherent differences.  Thus, of the three comparisons Counties, St. Croix is perhaps the most reasonable; it is experiencing the same types of growth dynamics but yet is independent of those same factors affecting Jefferson County.

### Trade Area Analysis.

Consider first Pull Factors for retail sales that are subject to the county sales tax (Figure 11a).  Of the 14 retail sectors, only five have Pull Factors that are greater than one including automobile and other motor vehicle sales (PF=1.04), gasoline stations including include convenience store with gas (PF=1.26), clothing and accessories stores (PF=1.81), furniture and home furnishing stores (PF=1.11) and general merchandise stores (PF=1.11). The remaining nine retail sectors each reported Pull Factors less than one with the smallest Pull Factors describing sporting, hobby, book and music stores (PF=.23) followed by health and personal care stores (PF=.46) and performing arts, spectator sports and related industries (PF=.60).  Although the Pull Factor for overall retail is 1.01, which suggests that the Jefferson County retail sector is performing just as we might expect it too, the large number of more focused sectors that are performing below what we would expect could be a cause for concern.



Figure 11a. Pull Factors for Jefferson County Retail Sales: 2004
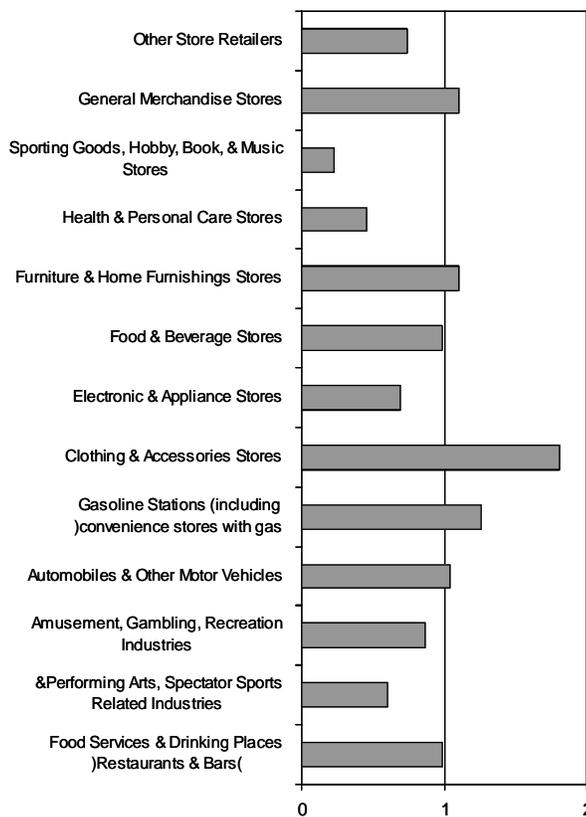
Source: UW-Extension, WI DoR Sales Tax Data

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The natural question is why so many sectors are performing below expectations.
If we compare Jefferson to our three reference counties a couple of patterns become apparent (Table 1).  First, based on the Pull Factor for overall retail sales, Columbia County is performing below expectations (PF=.87) while St. Croix and Walworth have Pull Factors greater than one. Let us focus attention on three specific sectors, two weaknesses and one strength for Jefferson County.  As we saw health and personal care stores along with sporting goods, hobby, book and music stores appears to be a weakness for Jefferson, but when we look at the comparison counties we see that these are weaknesses for these counties.  When we look across all counties health personal care stores tend to perform best in larger metro areas such as Dane and Milwaukee counties.  Therefore, it may be reasonable to conclude that the low Pull Factor for this latter category should not be surprising.  The same appears to hold true for sporting goods, hobby, book and music stores.  The types of counties that perform well in this category tend to be more rural counties that have large hunting and fishing markets such as Iron and Crawford Counties

Table 1:  Pull Factors for Jefferson and Comparison Counties 2004

| Pull Factors | Jefferson | Columbia | St. Croix | Walworth |
|---|---|---|---|---|
| Total Retail | 1.009 | 0.873 | 1.088 | 1.155 |
| Food Services & Drinking Places (Restaurants & Bars) | 0.987 | 0.870 | 0.871 | 1.334 |
| Performing Arts, Spectator Sports & Related Industries | 0.604 | 0.961 | 1.153 | 1.446 |
| Amusement, Gambling, Recreation Industries | 0.864 | 0.579 | 1.989 | 3.782 |
| Automobiles & Other Motor Vehicles | 1.038 | 1.151 | 1.018 | 1.267 |
| Gasoline Stations (including convenience stores with gas) | 1.260 | 1.643 | 1.657 | 1.589 |
| Clothing & Accessories Stores | 1.810 | 0.453 | 0.190 | 0.419 |
| Electronic & Appliance Stores | 0.690 | 0.707 | 0.287 | 0.649 |
| Food & Beverage Stores | 0.983 | 1.012 | 1.113 | 0.868 |
| Furniture & Home Furnishings Stores | 1.106 | 0.746 | 1.890 | 1.032 |
| Health & Personal Care Stores | 0.461 | 0.489 | 0.143 | 0.742 |
| Sporting Goods, Hobby, Book, & Music Stores | 0.229 | 0.140 | 0.543 | 0.495 |
| General Merchandise Stores | 1.108 | 0.787 | 0.962 | 1.644 |
| Other Store Retailers | 0.741 | 0.853 | 1.263 | 0.823 |
| Nonstore Retailers | 0.838 | 0.554 | 0.393 | 0.543 |
| Total Services | 0.816 | 0.727 | 0.820 | 1.469 |
| Hotels, Motels & Other Traveler Accommodations | 0.348 | 0.844 | 0.524 | 3.236 |
| Banking, Insurance and Other Finance Activities | 0.543 | 0.341 | 0.545 | 0.662 |
| Administrative & Support Services | 0.940 | 0.375 | 0.632 | 0.857 |
| Health Care and Social Assistance Services | 0.594 | 0.707 | 0.393 | 0.524 |
| Personal & Household Services | 0.856 | 0.952 | 0.975 | 1.404 |
| Business Services | 0.776 | 0.855 | 0.765 | 1.481 |
| Repair & Maintenance Services | 1.134 | 0.701 | 1.015 | 0.996 |
| Professional Services | 0.313 | 0.219 | 0.292 | 0.358 |
| Architectural, Engineering, & Related Services | 0.154 | 0.147 | 14.747 | 1.671 |
| Computer System Services | 0.702 | 0.266 | 0.518 | 0.723 |
| Scientific & Other Services | 0.727 | 0.195 | 1.114 | 3.230 |
| Rental & Leasing Services | 0.915 | 0.714 | 0.898 | 0.887 |
| Real Estate Services (Rental, Management, Appraisal) | 5.253 | 0.270 | 1.737 | 0.754 |

To complete our analysis of retail sales it is important to consider the dollar values associated with the Pull Factors, or the Surplus/Leakage estimates (Table 2). Based on the Pull Factor for the whole of the retail sector, we expect a Surplus and we indeed uncover one of $5.4 million. The Surplus values for automobiles and other motor vehicles is $4.7 million, and furniture and home furnishing stores have a Surplus of just over $9 million. The largest Surplus is for clothing and accessories stores at $23.9 million and is attributable to the Johnson Creek Mall and Kohl's Department Store.[9]

Table 2:  Surplus and Leakage for Jefferson and Comparison Counties 2004

| Surplus/Leakage | Jefferson | Columbia | St. Croix | Walworth |
|---|---|---|---|---|
| Total Retail | $ 5,385,187 | $ (58,818,259) | $ 51,357,550 | $ 113,134,416 |
| Food Services & Drinking Places (Restaurants & Bars) | $ (1,020,081) | $ (8,062,540) | $ (10,087,560) | $ 32,687,860 |
| Performing Arts, Spectator Sports & Related Industries | $ (1,750,881) | $ (132,320) | $ 648,339 | $ 2,367,197 |
| Amusement, Gambling, Recreation Industries | $ (750,252) | $ (1,764,270) | $ 5,233,816 | $ 18,391,782 |
| Automobiles & Other Motor Vehicles | $ 4,670,493 | $ 14,036,728 | $ 2,089,075 | $ 39,143,327 |
| Gasoline Stations (including convenience stores with gas) | $ 4,138,033 | $ 7,759,865 | $ 10,016,943 | $ 11,223,371 |
| Clothing & Accessories Stores | $ 23,893,161 | $ (12,248,718) | $ (22,923,679) | $ (20,555,488) |
| Electronic & Appliance Stores | $ (5,284,574) | $ (3,787,136) | $ (11,652,365) | $ (7,174,516) |
| Food & Beverage Stores | $ (735,588) | $ 408,340 | $ 4,821,653 | $ (7,052,550) |
| Furniture & Home Furnishings Stores | $ 9,059,518 | $ (16,532,551) | $ 73,321,817 | $ 3,323,114 |
| Health & Personal Care Stores | $ (4,641,321) | $ (3,344,393) | $ (7,082,185) | $ (2,660,216) |
| Sporting Goods, Hobby, Book, & Music Stores | $ (10,491,382) | $ (8,883,046) | $ (5,971,697) | $ (8,240,286) |
| General Merchandise Stores | $ 10,054,017 | $ (15,130,207) | $ (3,401,467) | $ 72,183,258 |
| Other Store Retailers | $ (20,698,112) | $ (8,932,949) | $ 20,139,772 | $ (16,929,121) |
| Nonstore Retailers | $ (1,057,845) | $ (2,205,062) | $ (3,794,914) | $ (3,573,315) |
| Total Services | $ (22,745,430) | $ (25,630,250) | $ (21,371,362) | $ 69,533,684 |
| Hotels, Motels & Other Traveler Accommodations | $ (13,190,434) | $ (2,398,630) | $ (9,245,201) | $ 54,222,876 |
| Banking, Insurance and Other Finance Activities | $ (1,958,936) | $ (2,143,607) | $ (1,871,550) | $ (1,735,666) |
| Administrative & Support Services | $ (280,365) | $ (2,210,814) | $ (1,645,205) | $ (800,520) |
| Health Care and Social Assistance Services | $ (536,180) | $ (293,917) | $ (769,290) | $ (753,872) |
| Personal & Household Services | $ (3,175,278) | $ (803,592) | $ (537,314) | $ 10,667,590 |
| Business Services | $ (4,202,927) | $ (2,071,700) | $ (4,236,673) | $ 10,826,636 |
| Repair & Maintenance Services | $ 2,546,302 | $ (4,326,863) | $ 265,883 | $ (100,248) |
| Professional Services | $ (82,427) | $ (71,123) | $ (81,476) | $ (92,235) |
| Architectural, Engineering, & Related Services | $ (165,739) | $ (126,837) | $ 2,583,129 | $ 157,421 |
| Computer System Services | $ (2,872,035) | $ (5,359,908) | $ (4,452,283) | $ (3,198,893) |
| Scientific & Other Services | $ (351,151) | $ (786,675) | $ 140,416 | $ 3,443,439 |
| Rental & Leasing Services | $ (1,811,369) | $ (4,602,139) | $ (2,076,678) | $ (2,871,379) |
| Real Estate Services (Rental, Management, Appraisal) | $ 3,335,109 | $ (434,450) | $ 554,879 | $ (231,467) |

While the identification of the market's strengths are important, the identification of market weaknesses are perhaps more important because they represent potential markets that can perhaps be immediately addressed. Other than the default category of "other retail stores" which as a Leakage of $20.7 million, the sporting goods, hobby, book and music stores category has the largest Leakage with $10.5 lost potential sales. The question is whether the market Leakage is sufficiently large to warrant investment in these types of stores? Given the low Pull Factor for our comparison counties, the large Leakage, it could be argued, is as expected. A similar line of reasoning could be applied to electronic and appliance stores with a Leakage of $5.3 million. In the end, however, any sector that has large Pull Factors and corresponding Surpluses represents a strength for the local retail market and should be further explored. At the same time, sectors with low Pull Factors and large Leakages should raise the question why and what can be done to help "close the gap."

Turning attention to the service sectors that are subject to the sales tax, we see that again Jefferson County is performing below levels that we would expect (Figure 11b). Of the thirteen specific service categories only two have a Pull Factor greater than one: repair and maintenance services (PF=1.13) and real estate services (PF=5.25). The strength of the real estate services

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[9] It is important to keep in mind that specific businesses can be classified differently across data sources. In the historical analysis the stores that are in Johnson Creek Mall are classified differently than in the Wisconsin sales tax data. This documents why knowledge of the County and its markets are vital to interpreting and understanding the results of the data analysis. Without knowledge of the local markets, the analysis of the data becomes sterile and can lead to erroneous conclusions

sector is remarkable and only Sauk County has a higher Pull Factor. Unfortunately, eleven of the thirteen taxable services have Pull Factors less than one suggesting that the County's service sector is not performing at the levels that we would expect. Given the lagging growth in service sector employment (Figure 9a) this result is not completely unexpected. When we compare the Pull Factors for Jefferson County across our three comparison counties additional insights into the strengths and weaknesses of the service sector can be gained (Table 1). Consider the category of professional services where the County's Pull Factor is equal to .313 which would indicate a market for potential expansion. But, when we look across Columbia, St. Croix and Walworth Counties we see that small Pull Factors are common for counties that are similar to Jefferson County. When we look around Wisconsin we find that these types of firms tend to locate and operate in larger markets such as Eau Claire and Milwaukee. The same line of reasoning can be applied to banking, insurance and other financial services as well as health care and social assistance services. This is not to say that counties cannot "specialize" in specific services.



**Figure 11.b Pull Factors for Jefferson County Service Sales: 2004**

Source: UW-Extension, WI DoR Sales Tax Data

Department of Agricultural and Applied Economics, UW-Madison/Extension

For Jefferson the large Pull Factor for real estate services is a case in point. Similarly, the is a large firm in St. Croix County that specializes in engineering services that accounts for the large Pull Factor in addition to a scientific services firm in Walworth County.

When we look at levels of Surplus/Leakage across the service sectors we can again reveal the level of monies gained (Surplus) or lost (Leakage) associated with the Pull Factor. The services sector that is losing the largest dollar volume is hotels and motels with a Leakage of $13.2 million. The development of motels near the Johnson Creek Mall is a reflection not only of the synergies created by the Mall itself, but also the market reacting to the large Leakage. The large Pull Factor and correspondingly large Surplus for hotels, motels and other traveler accommodations for Walworth County is a reflection of its highly developed recreational industry. The counties with the largest Pull Factor for this sector include Sauk and the Wisconsin Dell's area along with Door County.
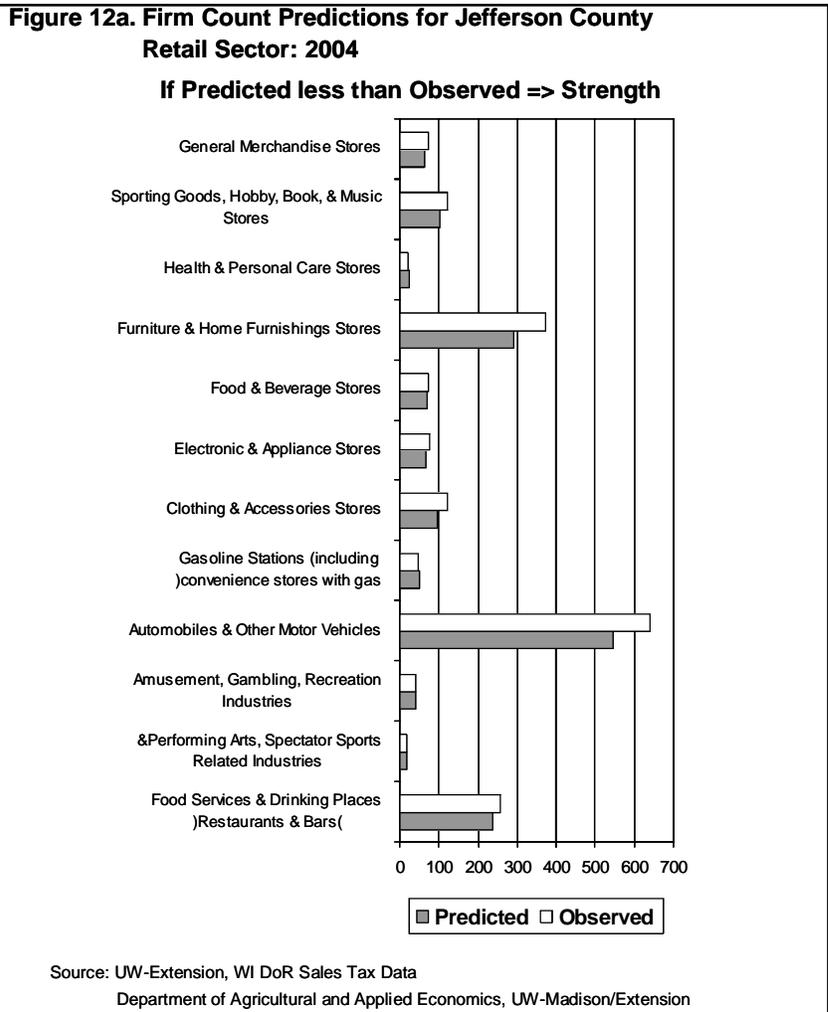
Other sectors that are experiencing large losses included computer system services with a Leakage of $2.9 million, business services with a Leakage of $4.2 million, personal and household services where the Leakage is $3.2 million. While the loss of market potential with computer services maybe somewhat expected given our comparison counties, the large losses for the latter two warrant further examination. Business, personal and household services are all growth potential markets, and the level of Leakage suggests that this market is worth further analysis. Indeed, if the County is attempting to promote small business development either through entrepreneurship or the retention and expansion of existing small businesses, access to quality business services is important. Hence, the promotion of business services broadly defined will help not only address a Leakage within the County's market, but also provide positive spillover to other businesses within the County. A current county initiative sponsored by the JCEDC is the Entrepreneurial and Inventors Connection. This organization brings people together to network about creative business opportunities in both the retail and the business sectors in Jefferson County. A potential limitation to our analysis of the service sector, and to a lesser extent the retail sector, is that our data is limited to taxable sales. Professional services with a Pull Factor of .313 (which is on par with the three comparison counties) has a Leakage of only $82,000. Such a small Leakage associated with a small Pull Factor can have two possible interpretation. The first is that the sector is small to begin with and the market potential is minimally independent of the Pull Factor. Professional services, however, is too large of a sector for this interpretation to apply. The second interpretation is related to the definition of taxable sales. Within the category of professional services the sales that are subject to the sales tax are but a small fraction of the activity within this sector. This observation again points to the importance of the reader to apply their own personal knowledge of the local economy in drawing conclusions.

***Firm Count Analysis***. As described above and in the technical appendix to this study, the greater the number of ways in which we can analyze and examine the data the better. So far we have looked at historical trends and taxable sales and uncovered a number of important observations. The third approach is to look not at the level of sales but the number of firms within each of the 27 taxable retail and service sectors. As described in detail in the technical appendix we use regression analysis to develop statistical relationships between a range of socioeconomic variables and the number of firms of a particular type. Using those statistical relations we are able to compare and contrast what "should be" and what actually is located in the County.

 In addition to looking at the differences between predicted and observed levels we can incorporate the results of the



**Figure 12a. Firm Count Predictions for Jefferson County Retail Sector: 2004**

**If Predicted less than Observed => Strength**

Source: UW-Extension, WI DoR Sales Tax Data
Department of Agricultural and Applied Economics, UW-Madison/Extension

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Trade Area Analysis presented above to help gain further insights.  Consider first the retail sectors where we can see that in eight of the classifications of businesses the observed number of establishments is greater than the predicted level (Figure 12a).   These include restaurants and bars, furniture and home furnishing stores, car and other motorized vehicle retailers, sporting goods, hobby, book and music stores, clothing and accessories stores, electronic and appliance stores and general merchandise stores.  There are only a handful of sectors that have fewer establishments than predicted by the statistical models and these include health and personal care stores and gasoline service stations and convenience stores that also sell gasoline.  The remaining three, including food and beverage stores, performing arts, spectator sports and related industries, and amusement, gambling and recreational businesses, perform close to what is expected given the statistical modeling results.

We can also gain insights into the County's retail market by looking at the absolute number of establishment that are present.  For example, one would not think that car and other motorized vehicle retailers would have the largest number of establishment at an observed level of 640.  The next largest is furniture and home furnishing stores with an observed number of 372.  In addition, we would not expect to see a large number of health and personal care stores with a predicted level of 24 stores and an observed level of 21 stores.  Surprisingly, we would expect to see only about 50 gasoline stations and convenience stores with gas.  These results are
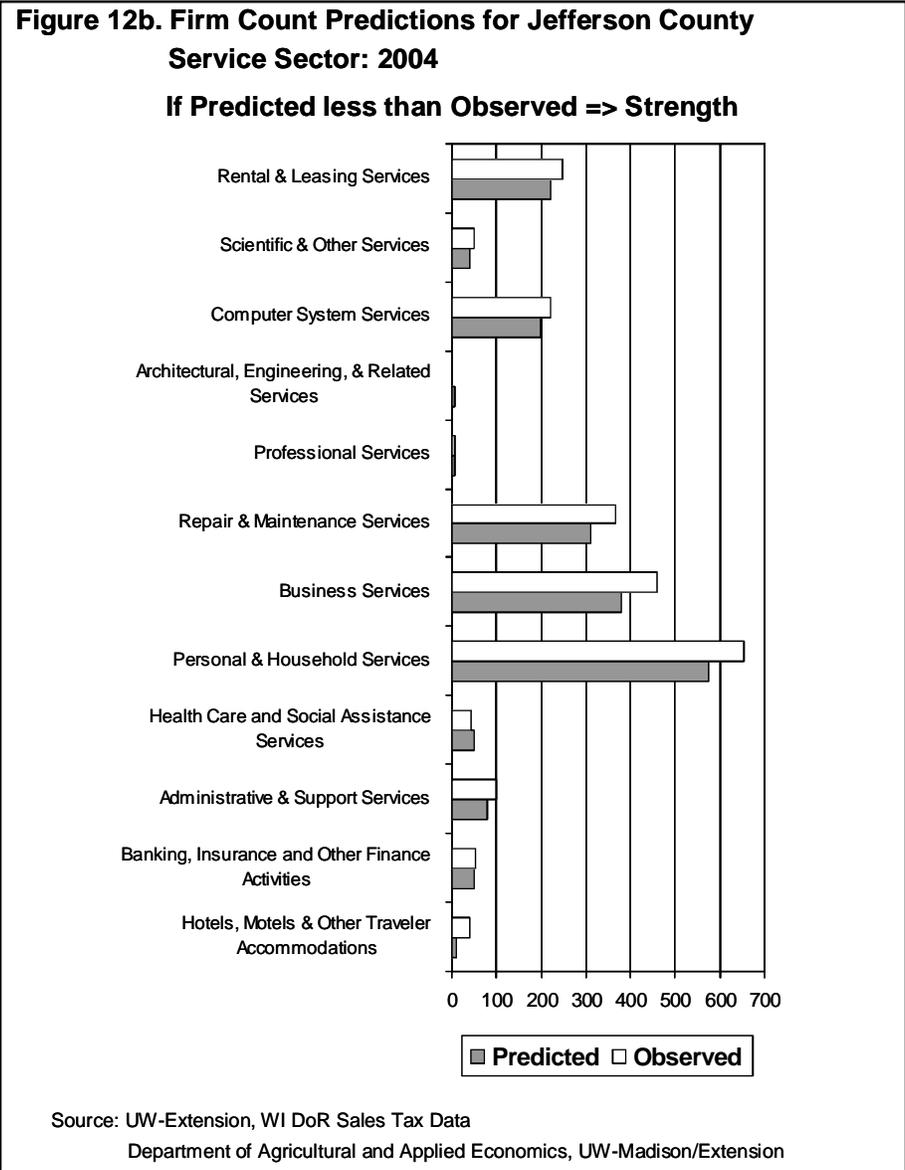
Table 3a. Estimates of Strengths and Weaknesses Using Count Data: Taxable Retail Industries

| | Observed | Predicted | Error | | Observed | Predicted | Error |
|---|---|---|---|---|---|---|---|
| **Food Services & Drinking Places (Restaurants & Bars)** | | | | **Food & Beverage Stores** | | | |
| *Jefferson* | *258* | *238* | *20* | *71* | *70* | *1* | |
| Columbia | 214 | 181 | 33 | 61 | 57 | 4 | |
| St. Croix | 179 | 222 | -43 | 59 | 65 | -6 | |
| Walworth | 302 | 263 | 39 | 97 | 75 | 22 | |
| **Performing Arts, Spectator Sports & Related Industries** | | | | **Furniture & Home Furnishings Stores** | | | |
| *Jefferson* | *16* | *17* | *-1* | *372* | *291* | *81* | |
| Columbia | 14 | 13 | 1 | 287 | 241 | 46 | |
| St. Croix | 18 | 15 | 3 | 242 | 310 | -68 | |
| Walworth | 23 | 20 | 3 | 442 | 325 | 117 | |
| **Amusement, Gambling, Recreation Industries** | | | | **Health & Personal Care Stores** | | | |
| *Jefferson* | *38* | *38* | *0* | *21* | *24* | *-3* | |
| Columbia | 35 | 29 | 6 | 21 | 20 | 1 | |
| St. Croix | 31 | 33 | -2 | 21 | 26 | -5 | |
| Walworth | 52 | 37 | 15 | 29 | 25 | 4 | |
| **Automobiles & Other Motor Vehicles** | | | | **Sporting Goods, Hobby, Book, & Music Stores** | | | |
| *Jefferson* | *640* | *546* | *94* | *121* | *101* | *20* | |
| Columbia | 494 | 409 | 85 | 93 | 81 | 12 | |
| St. Croix | 320 | 420 | -100 | 99 | 105 | -6 | |
| Walworth | 580 | 553 | 27 | 118 | 118 | 0 | |
| **Gasoline Stations (including convenience stores with gas)** | | | | **General Merchandise Stores** | | | |
| *Jefferson* | *45* | *50* | *-5* | *72* | *62* | *10* | |
| Columbia | 48 | 43 | 5 | 59 | 51 | 8 | |
| St. Croix | 34 | 48 | -14 | 45 | 55 | -10 | |
| Walworth | 68 | 49 | 19 | 83 | 64 | 19 | |
| **Clothing & Accessories Stores** | | | | **Other Store Retailers** | | | |
| *Jefferson* | *122* | *95* | *27* | *1759* | *1526* | *233* | |
| Columbia | 92 | 81 | 11 | 1336 | 1220 | 116 | |
| St. Croix | 82 | 97 | -15 | 1234 | 1554 | -320 | |
| Walworth | 134 | 117 | 17 | 2051 | 1608 | 443 | |
| **Electronic & Appliance Stores** | | | | | | | |
| *Jefferson* | *75* | *67* | *8* | | | | |
| Columbia | 58 | 55 | 3 | | | | |
| St. Croix | 45 | 64 | -19 | | | | |
| Walworth | 77 | 66 | 11 | | | | |

somewhat counter-intuitive; one might expect that the number of gas stations would be significantly larger than the number of car and motor vehicle dealers.   But again, care must be taken because the scale of the establishments is not taken into account with this analysis.  If one sells cars, boats or even snowmobiles as a "hobby" or sideline business they must have the appropriate sales tax licenses.   So again, local knowledge of the markets is an important element in interpreting these results.

When we look at the service sectors that are subject to the sales tax three sectors "jump out" as dominating services and these include personal and household services, business services and repair and maintenance services (Figure 12b).  For Jefferson County, the number of observed establishments in each of the three is greater than the number of predicted establishments.  Of the twelve service sector classifications Jefferson County has only two that have fewer firms than we would anticipate including architectural, engineering and related services as well has health care and social assistance services.  It is interesting to note that the market potential for professional services along with architectural, engineering and related services is modest with less than ten firms for each classification.[10]  Thus, from a simple Firm Count Analysis, Jefferson County appears to be doing very well with respect to both retail and service sectors.

***Combining the Tools***
The Trade Area Analysis (TAA) and the



**Figure 12b. Firm Count Predictions for Jefferson County Service Sector: 2004**

**If Predicted less than Observed => Strength**

(Rental & Leasing Services, Scientific & Other Services, Computer System Services, Architectural, Engineering, & Related Services, Professional Services, Repair & Maintenance Services, Business Services, Personal & Household Services, Health Care and Social Assistance Services, Administrative & Support Services, Banking, Insurance and Other Finance Activities, Hotels, Motels & Other Traveler Accommodations)

Legend: ■ Predicted  □ Observed

Source: UW-Extension, WI DoR Sales Tax Data
Department of Agricultural and Applied Economics, UW-Madison/Extension

Firm Count Analysis (FCA) both have their individual strengths and weaknesses.  TAA provides us with dollar estimates of potential market strengths and weaknesses and these dollar estimates are important with thinking about business promotion and/or expansion planning.  In short, is the Leakage sufficiently large to promote new businesses or is the gap small enough that current businesses with additional work could capture?  Can sectors that have large Surpluses act as anchors and promote the spillover of other types of businesses as we are now experiencing with the Johnson Creek Mall?  The weakness is that we can only examine that part

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[10] Again, care must be taken that this analysis includes only firms that are subject to the sales tax.  There may be other firms of this type in the County that are not subject to the sales tax.

of the industry that is subject to the sales tax and for many services this is a narrow element of they full range of services offered.  The advantage to using firm count data is that it is not subject to some of the limitations of using sales data; if a firm has any taxable activity it is included in the analysis.  The disadvantage is that each firm is treated the same; a large multi-brand car dealership is treated the same as a small used car lot.

Table 3b. Estimates of Strengths and Weaknesses Using Count Data: Taxable Service Industries

| | Observed | Predicted | Error | | Observed | Predicted | Error |
|---|---|---|---|---|---|---|---|
| | | Hotels, Motels & Other Traveler Accommodations | | | | Professional Services | |
| *Jefferson* | *38* | *9* | *29* | | *7* | *7* | *0* |
| Columbia | 71 | 30 | 41 | | 7 | 6 | 1 |
| St. Croix | 32 | 26 | 6 | | 6 | 8 | -2 |
| Walworth | 83 | 48 | 35 | | 7 | 7 | 0 |
| | | Banking, Insurance and Other Finance Activities | | | | Architectural, Engineering, & Related Services | |
| *Jefferson* | *52* | *48* | *4* | | *2* | *5* | *-3* |
| Columbia | 38 | 39 | -1 | | 6 | 4 | 2 |
| St. Croix | 44 | 47 | -3 | | 5 | 5 | 0 |
| Walworth | 51 | 49 | 2 | | 8 | 6 | 2 |
| | | Administrative & Support Services | | | | Computer System Services | |
| *Jefferson* | *100* | *78* | *22* | | *221* | *197* | *24* |
| Columbia | 71 | 61 | 10 | | 144 | 143 | 1 |
| St. Croix | 83 | 87 | -4 | | 175 | 208 | -33 |
| Walworth | 94 | 87 | 7 | | 240 | 218 | 22 |
| | | Health Care and Social Assistance Services | | | | Scientific & Other Services | |
| *Jefferson* | *44* | *48* | *-4* | | *49* | *41* | *8* |
| Columbia | 34 | 35 | -1 | | 29 | 29 | 0 |
| St. Croix | 49 | 45 | 4 | | 38 | 44 | -6 |
| Walworth | 57 | 51 | 6 | | 53 | 44 | 9 |
| | | Personal & Household Services | | | | Rental & Leasing Services | |
| *Jefferson* | *653* | *574* | *79* | | *249* | *222* | *27* |
| Columbia | 512 | 453 | 59 | | 182 | 168 | 14 |
| St. Croix | 494 | 592 | -98 | | 204 | 240 | -36 |
| Walworth | 776 | 639 | 137 | | 262 | 230 | 32 |
| | | Business Services | | | | Repair & Maintenance Services | |
| *Jefferson* | *458* | *380* | *78* | | *367* | *309* | *58* |
| Columbia | 333 | 306 | 27 | | 247 | 239 | 8 |
| St. Croix | 328 | 436 | -108 | | 234 | 289 | -55 |
| Walworth | 600 | 444 | 156 | | 358 | 294 | 64 |

If we use the sets of tools in tandem powerful insights into the nature of the local markets can be gained.  There are four possible combination and corresponding interpretations.  If the Pull Factor is greater than one and the observed number of firms is greater than that which is predicted by the statistical model, then one can conclude that this particular sector is a strength for the local market.  If the Pull Factor is less than one and the observed number of firms is less than that predicted by the model, the interpretation is that the sector is weak.  In these two cases, the TAA and FCA agree and are reaffirming.  The more interesting results are the "off-diagonals" where the two methods of market analysis appear to contradict each other.  If the Pull Factor is greater than one, indicating a strength, but the observed number of firms in less than that predicted by the statistical modeling, indicating a weakness, then this is an indication that the existing firms are performing above expectations.  In other words, a smaller number of firms

have more sales activity then we would expect.  This might be described as a market dominated by a smaller number of firms that have high sales.  The final possible combination is where the Pull Factor is less than one, but the number of observed firms is greater than the predicted number of firms we would expect given our statistical results.  Here the firms are not performing as expected.  This might be described where a large number of smaller firms are not able to capture the existing market.

| | | Firm Count | |
|---|---|---|---|
| | | Predicted > Observed | Predicted < Observed |
| **Pull Factors** | Greater than One | Existing firms doing better than expected | both TAA and FCA indicate strength |
| | Less than One | both TAA and FCA indicate weakness | Existing firms doing worse than expected |

Of the four possibilities, let us consider the sectors where both the TAA and FCA concur that the sector is a strength for the County.  There are four sectors that fall into this "strength" classification and include automobile and other motor vehicle firms, clothing and accessories stores, furniture and home furnishing stores, and finally general merchandise stores.  In the prior Market Study in 1998, Jefferson County was significantly deficient in three of these sectors--the general merchandise, clothing/apparel/accessories and furniture/home furnishings. Since that time the Johnson Creek Mall, Kohl's Department Store, Menard's, local furniture stores and the expanded Walmart in Watertown likely contributed to the turn-around in these retail sectors. Automobile and other motor vehicle firms continue to be a strength in Jefferson County.

There are only two retail sectors that reveal a consistent weakness and these are performing arts, spectator sports and related industries as well as health and personal care stores.  While Jefferson County significantly benefits from the Fireside Theater as well as regional and local performing arts initiatives such as the Center for the Performing Arts, the County still appears to have a weakness in this sector. Efforts to accelerate efforts in this area are underway, including initiatives with many smaller businesses. This is evident in activities sponsored by the Jefferson County Tourism Council such as the "Art, Antique and Gallery Tour" program. The hard data may not pick up the actual extent of activity.

There is only one category where the TAA identified a strength and the FCA identified a weakness and this is the classification of gasoline station including convenience stores with gasoline.  Based upon our interpretation above, this analytical evidence suggests that firms in this category are doing "very well."  One potential interpretation is that there are a smaller number of firms with remarkably high sales per firm. A reasonable assumption for this higher performance with fewer firms is the strong locational advantages of several gasoline related businesses along I-94, Highway 26 and Highway 16 which have strong business activity. Five classifications of firms fall into the final possible combination where the TAA identifies a weakness while the FCA identifies a strength.  These include restaurants and taverns, electronic and appliance stores, food and beverage stores, sporting goods, hobby, book and music stores and the generic "other retail stores."  The Pull Factor for restaurants and taverns is .987 which is for all practical purposes equal to one (Leakage is $1 million) the threshold value for Pull Factors, couple with the predicted value of number of firms is within five percent of the observed number of firms one could reasonable conclude that Jefferson County has the appropriate number of restaurants and taverns.  Food and beverage stores also appear to be performing close to what might be expected.  Although the TAA identified a Leakage of $735,000 and the FCA suggested that there is one more store than expected, these taken in tandem suggests that the sector is performing very close to what might be expected.  If pushed, one might conclude that the existing stores are not capturing all of the potential market, but the gap is relatively small.

There has been considerable discussion about the real need for new groceries and food service store in the County. There have also been proposals for new groceries. The data would suggest that the food and beverage store sector is adequately serving the Jefferson County area.

Electronic and appliance stores can be described a bit differently. The TAA suggests that there is nearly $5.3 million leaking out of the County but there are at the same time eight more stores in the County than we would expect. The natural interpretation of this result is that the firms of this type that are located in Jefferson County are not performing as well as might be expected. It could be that these firms in Jefferson County are generally small and unable to capture the whole of the market. Jefferson County does not have the larger computer and electronics-related stores that are available in the larger urban areas. The results are clear. It is not the case that there are not a sufficient number of firms in the market, but rather the firms that are present are not capturing their market potential.

If we turn our attention to the service sectors, we see that the vast majority of the categories examined can be described as experiencing Leakages (Pull Factor less than one) yet more establishments than expected. The interpretation is the same as above when the two analytical methods appear to contradict themselves. Specifically, that the existing firms are not capturing the full market potential. This could be that the sector is composed of a large number of smaller firms that do not have sufficient sales to generate a Surplus. The natural policy interpretation is that we do not need to encourage more firms to start in the County, but rather we need to work with the existing businesses to expand their sales base to capture the full market potential.

There are only two sectors that exhibit both Leakages and fewer firms than expected; health care and social assistance services and architectural, engineering and related services. The Leakages, however, are relatively small and care must be taken when promoting these two sectors. Recall, not all product lines offered by these types of firms are subject to the sales tax and the measure of Leakage may be distorted. When we combine this information with the historical trends in service sector employment it becomes evident that there is greater potential for the service sector than is being realized. In addition, given the relative strength of earnings growth in the service sector compared to employment growth, the level of pay within the service sector justifies paying particular attention to these types of firms.

The local health care community continues to be responsive to changing health care demands in Jefferson County. Local initiatives include a major expansion to the Fort Atkinson Hospital and Health Care operation, new health care clinics in Watertown as well as a major new regional UW-related cancer center in Johnson Creek.

Regarding architectural and engineering firms, existing firms in greater Milwaukee and Madison market themselves extensively in Jefferson County, and have historically provided a significant amount of the professional service work in Jefferson County.

## General Considerations and Limitations of This Market Analysis Study

This study has used three separate sets of analytical tools to gain insights into the performance of Jefferson County's retail and service markets. These include historical analysis using simple growth indices, the analysis of sales data using the tools of Trade Area Analysis (TAA) and finally the analysis of the number of firms present in the County using Firm Count Analysis (FCA). When we combine the three sets of analytical tools, we gained powerful insights into the strengths and weaknesses of the County's market economy. We have identified a number of sectors that are doing much better than we would expect, including clothing stores, as well as those that are performing poorer than we would expect including health and personal care stores.

As with any study of this nature there are limitations that we must be sensitive to. We base the bulk of our analysis on county sales tax data and while this type of data is commonly accepted as the best type of information available, it is limited to what is defined as being taxable. Sales and firms that are not subject to the sales tax are not included in the analysis. A second problem with our analysis is that it is at the county level with no attention to the performance of individual communities within the county. One must also realize that the county is a rather arbitrary spatial unit and does not necessarily reflect the true spatial retail and service markets. For example, the Cities of Whitewater and Watertown straddle the county boundaries and are only partially within Jefferson County. Customers that are making purchases within either of these two Cities, or indeed any community close to the boarder of the County, are not really concerned with county boundaries. In other words, goods and services that appear to be unavailable within the county are available just on the other side of the county boundary.

These limitations point to the need for the reader to bring local knowledge to the table to help us fully understand the ramifications of this analysis. The results may confirm prior expectations as well as present a few surprises. The overall intent of this study has been to provide a baseline analysis and provide a "big picture" of the County's retail and service markets. Strengths and weaknesses have been identified and areas of further discussion suggested. In the end, however, the analysis presented here is not sufficient to base business investments. Rather, this analysis has pointed existing businesses and potential entrepreneurs in the correct direction.

There exists a wide range of potential strategies can put in place to build on strengths of the local retail and service markets and address potential gaps. A detailed discussion of the vast range of potential strategies is not the intent of this study. Rather, the intent here is to introduce the reader to a broad range of ideas. The two broad classifications of strategies include: (a) increasing the flow of dollars into the community (e.g., build on Surpluses) and (b) increasing the re-circulation of dollars within the community (e.g., plug Leakages). Increasing the flow of dollars into the community means that the community is essentially injecting new money into the local economy by attracting consumers from surrounding communities or by capturing the dollars of visitors to the community. Consumers are both individuals as well as businesses. In each case the community is bringing more money into the community. Increasing the re-circulation of dollars in the community means that the community is plugging Leakages of money out of the local community's economy. In other words, the community is actively seeking ways to get people and businesses to spend more locally.

One can almost think of these as broad approaches to address "gaps" and "disconnects" within the local market. Gaps describe the case where a particular good or service is not available at a sufficient level for purchase in the local community. It may be the case that specific Disconnects are when the goods and services are available but local customers, both residents and businesses, are not making local purchases.

# Key Finding and Possible Strategies

## *Key Findings*

<u>Historical Context and Background</u>

Research has shown that market size, measured most commonly by population, determines the level of retail and service activity. Growth in these markets hinges to a large extent on growth in population.

In addition to market size, or population, income is a major determinant of the consumers within the market "ability to pay."

- Jefferson County's per capita income has historically lagged behind both the nation as well as Wisconsin.

- The 1990s, however, saw relatively strong growth in income for Wisconsin and Jefferson County. Despite remaining below the national average, the gap shrank significantly.

- Even though the analysis tells us real per capita income is growing both in Wisconsin and the nation the real per capita income is not growing as fast for Jefferson County over the past five years.

- The most recent data suggests that the County's recovery from the 2000-2001 recession has been modest. Based on the employment growth of the 1990s, the current economic recovery is modest, and again some may claim as being weak. The trends suggest that Jefferson County has only pulled even with the employment levels before the downturn in 2001. The most recent recession has been hard on Wisconsin and Jefferson County. Given the 2003 and 2004 employment data, the State and County's economies appear to be generating employment growth but at levels lower than what was experienced throughout the 1990s.

<u>Historical Trends in Retail and Services</u>
Manufacturing is the largest single source of employment in the County accounting for 24.5 percent of all jobs. The loss of manufacturing jobs in Jefferson County was a major explanation for only modest economic growth over the past few years.

<u>Overall Trends</u>
Retail trade accounts for slightly more than 19 percent of total employment which is higher than the nation (16.1%) and Wisconsin (16.7%). Based on this simple measure retail seems to be a strength of the County. Services coupled with F.I.R.E. (Finance, Insurance and Real Estate) accounts for more total employment (28.1%).

- The earnings level in the retail sector is relatively low (employment of 19.3 percent versus earnings of 10.3 percent). An alternative interpretation is that the retail sector is dominated by part-time jobs. The service sector also tends to have lower paying jobs on average (employment is 23 percent versus 19.5 percent for earnings).

- Total employment growth in the retail sector for the nation between 1969 and 2004 is 106 percent, 79 percent for Wisconsin and 107 percent for Jefferson County.

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■ The total employment growth in the service sector is very strong, but when Jefferson is compared to either the nation or Wisconsin, the growth is remarkably modest.

■ When we look at service sector earnings there is remarkable growth in Jefferson County as well as the nation and Wisconsin. Most notable is the surge in the growth rate for Jefferson County during the period from 1997 to 2000.

■ When compared to employment growth this indicates that there has been tremendous growth in earnings per job in the service sector. This sector includes health care which is composed of highly paid medical specialists as well as low paid cleaning and food preparation staff.

■ Because retail and service employment is growing faster than total employment in Jefferson County, these two sectors are growing in importance to employment opportunities across the County.

Long-Term Trends by Retail Sector Store Types

We have estimates of annual sales for a number of retail sectors.

■ Indeed, the growth rate during the 1990s was faster than either the nation or Wisconsin.

■ General Merchandise: For Jefferson total sales in this classification of retail stores increased by 270 percent which is much higher than either the U.S. or Wisconsin. The primary reason for the growth in sales is the growing popularity of "big-box" general merchandise stores such as Wal-Mart, Target and ShopKo to name just a few.

■ Apparel and Accessories Store: Apparel and accessories store sales have shown actual declines in Jefferson County. Several reasons could be advanced for the decline in sales in Jefferson County ranging from the clustering of these types of stores in urban centers such as Madison to the growing presence of general merchandise stores which offer these product lines. The reversal in the steady decline in apparel sales is likely explained by the opening of the Johnson Creek Premier Outlet Mall. The new Kohl's has also likely contributed to growth in sales.

■ Furniture and Home Furnishing Stores: Throughout the 1990s and up to 2004 the downward trend was reversed but the rate of growth still lagged behind the nation and Wisconsin.

■ Eating and Drinking Establishments: For Wisconsin and Jefferson County the growth has not been nearly as strong when compared to the nation. Given the strength of the tourism economy in Wisconsin coupled with strong linkage between tourism and restaurants, it is somewhat surprising that this has not been more of a growth sector in Wisconsin. Local community market analyses indicate that the demand may exist for these establishments in the County.

- Miscellaneous Retail Sales:  There has been remarkable growth in miscellaneous retail sales in the County.  What we are seeing here is the introduction of Johnson Creek Premium Outlets and the over 60 name-brand outlet stores.

Market Area Analysis

For the Market Area Analysis we use two sets of tools including Trade Area Analysis with measures of Pull Factors and Surplus/Leakage along with Firm Count Analysis where we compare and contrast the expected number of businesses with the over served.

- *Trade Area Analysis:  Pull Factors.*  Consider first Pull Factors for retail sales that are subject to the county sales tax.  Of the 14 retail sectors, only five have Pull Factors that are greater than one including automobile and other motor vehicle sales (PF=1.04), gasoline stations including include convenience store with gas (PF=1.26), clothing and accessories stores (PF=1.81), furniture and home furnishing stores (PF=1.11) and general merchandise stores (PF=1.11).

- *Trade Area Analysis:  Surplus/Leakage Dollar Values.*  The Surplus values for automobiles and other motor vehicles is $4.7 million, and furniture and home furnishing stores have a Surplus of just over $9 million.  The largest Surplus is for clothing and accessories stores at $23.9 million and is attributable to the Johnson Creek Mall and Kohl's Department Store.

- Of the thirteen specific service categories only two have a Pull Factor greater than one: repair and maintenance services (PF=1.13) and real estate services (PF=5.25).  Unfortunately, eleven of the thirteen taxable services have Pull Factors less than one suggesting that the County's service sector is not performing at the levels that we would expect.

- The services sector that is losing the largest dollar volume is hotels and motels with a Leakage of $13.2 million.  The development of motels near the Johnson Creek Mall is a reflection not only of the synergies created by the Mall itself, but also the market reacting to the large Leakage.

- Business, personal and household services are all growth potential markets, and the level of Leakage suggests that this market is worth further analysis.  Indeed, if the County is attempting to promote small business development either through entrepreneurship or the retention and expansion of existing small businesses, access to quality business services is important.  Hence, the promotion of business services broadly defined will help not only address a Leakage within the County's market, but also provide positive spillover to other businesses within the County.

- *Firm Count Analysis:*  If the Pull Factor is greater than one and the observed number of firms is greater than that which is predicted by the statistical model, then one can conclude that this particular sector is a strength for the local market.

- Of the four possibilities, let us consider the sectors where both the Trade Area Analysis and Firm Count Analysis concur that the sector is a strength for the County.  There are four sectors that fall into this "strength" classification and include automobile and other motor vehicle firms, clothing and accessories stores, furniture and home furnishing stores, and finally general merchandise stores.  In the prior Market Study in 1998, Jefferson County was significantly deficient in three of these sectors--the general merchandise, clothing/apparel/accessories and furniture/home furnishings. Since that time the Johnson Creek Mall, Kohl's Department Store, Menard's, local furniture stores and the expanded Walmart in Watertown likely contributed to the turn-around in these retail sectors. Automobile and other motor vehicle firms continue to be a strength in Jefferson County.

■ There has been considerable discussion about the real need for new groceries and food service store in the County. There have also been proposals for new groceries. The data would suggest that the food and beverage store sector is adequately serving the Jefferson County area.

■ If we turn our attention to the service sectors, we see that the vast majority of the categories examined can be described as experiencing Leakages (Pull Factor less than one) yet have more establishments than expected.  The interpretation is that the existing firms are not capturing the full market potential.

■ There are only two sectors that exhibit both Leakages and fewer firms than expected; health care and social assistance services and architectural, engineering and related services.  Given the relative strength of earnings growth in the service sector compared to employment growth, the level of pay within the service sector justifies paying particular attention to these types of firms.


## *Possible Jefferson County Strategies in Response to This Analysis*

a. *Respond to Key Findings:  Determine opportunities identified in the "Key Findings" of this study.  Agree upon areas to explore further.*

b. *Enhance Marketing and Local Market Analysis:  Develop local marketing information, including the widespread sharing of this study, to help retail and service businesses in identifying market potentials and formulate business plans (e.g. the analysis presented in this study).  Continue the community market analyses such as those in  Waterloo and Watertown.*  Work to ensure that retail and service development policies aim at complementary growth where local firms are harmonized and not competitive.  Tourism Development is focusing on Jefferson County as a destination, and continues joint efforts with the Wisconsin Department of Tourism.

c. *Enhance Promotions:  Expand purchases by non-local people through appropriate advertising and promotions.*
   1. Coordinated advertising can build on economies of size and scope.
   2. Coordinate business hours.
   3. Sponsor downtown activities such as sidewalk sales or art fairs.
   4. Organize farmers markets to attract customers to the downtown.
   5. Communities have been targeting specific events through their Chamber of Commerce organizations or other groups. In Watertown, the Main Street Program launched a "Gateway to the Weekend" event series whereby food and entertainment were organized for 14 straight Friday Nights in different areas of Downtown. The Jefferson County Tourism Council has sponsored innovative marketing efforts such as an "Arts Gallery and Antiques Tour".
   6. Providing convenient parking or public transit.

d. *Enhance Training and Business Development:  Continue Jefferson County's efforts around business development.  Major initiatives include the "First Step" program to provide counsel to new business or those looking for ways to enhance their business.  Relatedly, the "Entrepreneurial and Inventors Connection" brings people together to network about creative business opportunities in both the retail and business sectors in Jefferson County.*  Also, aid businesses in developing employee-training programs to improve quality of service.  The Jefferson County Workforce Development Center is attempting to customize its efforts toward the needs and demands of the County's changing workforce.  Through the Home Consortium

Program and other initiatives, provide quality, affordable homes to stabilize workforce; enhance the construction sector.

e. ***Enhance Organizational Development and Planning: Encourage collective action through the strengthening or creating of organizations such as Main Street Programs, Chambers of Commerce, Tourism Councils, County Economic Development Consortium, etc.*** Other efforts to better target business opportunities include an increasing interest in plans to enhance vitality in Jefferson County communities' "Main Street" business centers. In addition, several communities are embarking on updated "Comprehensive Plans" to assure the consideration of a sound "future" vision for economic development, transportation, housing and other functions of the community. The partnership for a Glacial Heritage Area (as part of the State's Land Legacy Initiative) among the Wisconsin DNR, Jefferson County Parks Department, and individual communities has the potential to stimulate the "new" economy through a significantly expanded parks, recreation and trails presence in Jefferson County.

f. ***Implement business retention, expansion and attraction program recommendations: Continue to implement recommendations in the Jefferson County Business Retention. Survey.*** Make community information more accessible to prospective businesses. This would be exemplified in the LOIS (Web Based) information which is geared to providing demographic and community information to those looking at locating their business to Jefferson County. As recommended in the retention survey, continue to work with local government to ensure that key public services (e.g. fire and police, water and sewer, general administration) are more than satisfactory.

These broad-based strategies are clearly not exhaustive and are meant to only introduce the notion that strategies can range from the simplistic to the complex. It is also important that there is no one single strategy; that effective development of the retail and service sectors requires a multi-prong approach with overlapping strategies. Finally, strategies need to be constantly evaluated and adjusted to reflect changing markets.

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# Technical Appendix

## Growth Indices

A growth index is a cumulative measure of change based on the performance of the community's economy relative to some starting year. Growth indices can be computed for almost any economic variable such as income, employment, population, retail sales and even property values. Using the same justification for comparative places above, growth indices should be computed for more than the community of interest. Commonly, growth indices are computed for the state and the nation and they serve as benchmark reference points.

The index is computed for the community of interest and comparative places as:

$$Index_{st}^{i} = \left( \frac{Y_{st}^{i}}{Y_{s,1990}^{i}} \right) * 100 \qquad (T.1)$$

With subscripts identifying community (s), industry (i) and year (t). The variable Y is the economic variable of interest such as population or employment. In this example $Y_{1990}$ is the value of the variable of interest in the base year or beginning of the time period examined. The growth index compares the absolute level of the economic variable under examination to its level at the beginning of the period. For example, if income from farming is $500 in 1990 and $600 in the current year, than the value of the growth index in the current year is (600/500) x 100 = 120. In this example, income from farming for this region increased by 20 percent (120 - 100).

There are three advantages to using this measure of economic performance. First, placing all regional data on an index basis allows a direct comparison between regions, or in this case, the community of interest to the state and nation. Second, as noted above change in the value of the growth index from one year to the next can be interpreted as a growth rate. Here fast growth, slow growth, stagnant and declining industries can be identified. Finally, by examining the growth index over a period of time, one can establish the relative stability of a particular economic variable.

There are, unfortunately, a few disadvantages to using the growth index as constructed. First, the value of the growth index is very sensitive to scaling or more specifically initial levels. For example, a small industry account for $10 in income adds an additional $10 for a total of $20 of income. Here the growth index will go from a base of 100 to 200 indicating that this is a rapidly growing industry for the community. Now suppose that a larger industry that has $200 income adds $10 more in income for a total of $210. Here the growth index will go from a base of 100 to 105 indicating modest growth. This problem with the growth index hints at the second shortcoming in that the index does not speak to the relative importance of a particular industry to a community's economy.

## Trade Area Analysis

*Sales retention* is an indirect measure of locally available goods and services, assuming people buy locally if possible. While measurement of actual sales is relatively easy, measurement of the sales potential presents some difficulty. This assumes that not only are tastes and preferences are identical but also that the local trade area is demographically similar to the state. *Local potential sales* can be estimated by statewide average sales per capita adjusted by the ratio of local to state per capita income (Deller, et.al. 1991; Hustedde, Shaffer & Pulver 1993; Shaffer, Deller & Marcouiller 2004; Stone & McConnen 1983):

$$PS_s^i = P_s * PCS_{state}^i * \frac{PCI_s}{PCI_{state}}$$
(T.2)

where $PS_s^i$ is potential sales in community $s$ for sector $i$, $P$ is population, $PCS$ is per capita sales, $PCI$ is per capita income.

Care must be used in accepting the computed potential sales from equation (T.2). It ignores all of the shopping area and consumer characteristics that are located within the immediate and surrounding shopping areas. The potential sales provided from equation (T.2) assume no differences in local consumption patterns except adjusting by relative local income.  For example, the approach of Trade Area Analysis used here does not account for differences in the socioeconomic characteristics of the region, other than income. But this readily calculated estimate represents a realistic initial estimate.

One way to estimate the sales retention just divide actual sales by sales potential.  Actual sales can be gotten from a variety of sources, including census of business, sales tax data, and the merchants themselves.  Another approach to sales potential estimates the number of people buying from local merchants (Stone & McConnen, 1983; Hustedde, Shaffer & Pulver, 1993; Shaffer, Deller and Marcouiller 2004). The *Trade Area Capture* estimates the customer equivalents. Trade Area Capture used in conjunction with the *Pull Factor* permits the community to measure the extent to which it attracts nonresidents (e.g., tourists and nonlocal shoppers) and differences in local demand patterns.

Trade Area Capture estimates the number of customers a community's retailers sell to. Most trade area models consider market area as the function of population and distance. Trade Area Capture incorporates income and expenditure factors with the underlying assumption that local tastes and preferences are similar to the tastes and preferences of the state.  The verbiage here can become somewhat confusing in that the phrase trade area discussed above has a definite spatial meaning, but Trade Area Capture is aspatial.  Thus, the Trade Area Capture estimate suffers from the same caveats enumerated for Potential Sales estimated:

$$TAC_s^i = \frac{AS_s^i}{PCS_{state}^i * \frac{PCI_s}{PCI_{state}}}$$
(T.3)

where notation remains the same with the addition of $TAC$ is Trade Area Capture and $AS$ is actual sales.

The number calculated from equation (T.3) is the number of people purchased for, not the people sold to or actual customers in the store (i.e., if one person buys food for a family of four, all four are counted). If Trade Area Capture exceeds the trade area population then the community is capturing outside trade or local residents have higher spending patterns than the state average. If the Trade Area Capture is less than the trade area population the community is losing potential trade or local residents have a lower spending pattern than the statewide average. Further analysis is required to determine which cause is more important. Comparison of the Trade Area Capture estimates for specific retail or service categories to the total allows for additional insight about which local trade sectors are attracting customers to the community. It is important to make Trade Area Capture comparisons over time to identify trends.

Trade Area Capture measures purchases by both residents and nonresidents. The *Pull Factor* makes explicit the proportion of consumers that a community (the primary market) draws from

outside its boundaries (the secondary market, including residents in neighboring areas or tourists). The Pull Factor is the ratio of Trade Area Capture to municipal, in our case here county, population. The Pull Factor measures the community's drawing power. Over time, this ratio removes the influence of changes in municipal population when determining changes in drawing power. The Pull Factor is computed as:

$$PF_s^i = \frac{TAC_s^i}{P_s} \tag{T.4}$$

A Pull Factor (*PF*) greater than one implies that the local market is drawing or pulling in customers from surrounding areas. A Pull Factor less than one implies that the local market is losing customers to competing markets. The Pull Factor, much like percent sales retention estimate, can also be loosely interpreted like a location quotient. Pull Factors significantly greater than one often indicates an area of specialization for the local market. For example, tourist areas tend to have high Pull Factors and location quotients for restaurants, hotels and miscellaneous retail stores. The use of any tool by itself can often lead to erroneous conclusions. One must use a variety of tools to gain a clearer understanding of the local economy.

An alternative way to think about sales retention is to compute local *Surplus* or *Leakage* by looking at the difference between actual sales (*AS*) with Potential Sales (*PS*):

$$S/L_s^i = AS_s^i - PS_s^i \tag{T.5}$$

If actual sales (*AS*) is larger than Potential Sales (*PS*) and equation (T.5) is positive then there is said to be a Surplus, or the local market is performing better than one would expect. One could reasonably interpret a Surplus as the dollar value of the Pull Factor being greater than one. If actual sales (*AS*) is smaller than Potential Sales (*PS*) and equation (T.5) is negative then there is said to be a Leakage, or the local market is performing below what one would expect. Again, one could reasonably argue that a Leakage is the dollar value of the Pull Factor being less than one. For our purposes here, we will report the Pull Factor and the value of Surplus or Leakage.

Firm Count Analysis

Firm location theory that focuses on retail and services industries predicted that market size, often measured by market population, is a primary determinant of the number of firms of a particular type locating in a market. In practice community economic development practitioners often use a simple measure called market thresholds (e.g., Salyards and Leitner 1981; Schular and Leistritz 1991; Deller and Harris 1993; Deller and Ryan 1996; Harris, Chakraborty, Xiao and Narayanan 1996; Shaffer, Deller and Marcouiller 2004). In practice the empirical models often that the form:

$$N = \alpha + \beta P + \sum_{i=1\dots m} \gamma_i X_i + \varepsilon. \tag{T.6}$$

Here *N* is the number of firms of a particular type (e.g., grocery store, barber shop, etc.), *P* is a measure of the size of the community, usually population and *X* is a set of *m* socioeconomic variables such as income, age profiles, education levels among others. The parameters $\alpha, \beta$ and $\gamma$ are to be estimated and $\varepsilon$ is the regression error term.

A formulation of a simple regression model as outline in equation (T.6) allows the researcher to look at three separate items. The first is perhaps the most academic and is concerned with the parameters $\alpha, \beta$ and $\gamma$ in the traditional sense of hypothesis testing. For example, do age profiles influence the number of a particular type of firm and if so, in what way? The second is traditional threshold analysis which focuses on the relationship between the number of firms of a particular

type and the measure of community size, again traditionally population. For illustrative purposes, assume that equation (T.6) can be expressed solely in terms of the intercept term ($\alpha$) and size ($\beta P$). By slightly rearranging the estimated parameters (i.e., $\hat{\alpha}, \hat{\beta}$) we have:

$$N = \hat{\alpha} + \hat{\beta} P \rightarrow \frac{N - \hat{\alpha}}{\hat{\beta}} = P^C \qquad \text{(T.7)}$$

and $P^C$ is the critical value, or population required to support a given number of establishments. The third item is in the spirit of the industry targeting work of Goode, Hastings, Leatherman and Olfret where we look at the expected value of dependent variable, or in this case $N$, and this is the approach explored here.

Once we apply the appropriate estimation method to the model outline in equation (T.6) we have a statistical model that can be expressed as:

$$\hat{N} = \hat{\alpha} + \hat{\beta} P + \sum_{i=1\ldots m} \hat{\gamma}_i X_i. \qquad \text{(T.8)}$$

The difference between equation (T.6) and (T.7) is that equation (T.6) represents the "true" relationship between the right-hand-side variables and the number of firms ($N$) that we estimate using statistical methods, the results of which are expressed in equation (T.8). The error term ($\varepsilon$) captures errors in the data (sometimes called noise such as errors in the measurement of the variables), in the estimation (statistical) tools, the specification of the model itself, and the underlying theory. By entering the right-hand-side data for an given community, one can derive an estimate of an expected value of the number of firms ( $\hat{N}$ ). The value of the error term is derived as $\hat{\varepsilon} = N - \hat{N}$ and can be used to assess the strengths and weaknesses of the retail and service market of the community. If $N > \hat{N} \Rightarrow \hat{\varepsilon} > 0$ and the observed value is greater than what is predicted by the model. For our purposes, this is interpreted as the community having strength in this particular sector. If $N < \hat{N} \Rightarrow \hat{\varepsilon} < 0$ then we have the model predicting that the community should have a larger number of firms then observed. For our purposes, this is interpreted as the community having weakness in this particular sector. For the results of the statistical modeling see Deller, Kures and Ryan (2005).