



**Department of Agricultural  
and Applied Economics**

**Center for Community and  
Economic Development**



## **A TRADE AREA ANALYSIS OF WISCONSIN RETAIL AND SERVICE MARKETS: UPDATED FOR 2016**

**Steven C. Deller**

Professor and Extension Specialist, Department of Agricultural and Applied Economics  
Interim Director, Center for Community and Economic Development  
515 Taylor Hall – 427 Lorch Street  
University of Wisconsin-Madison/Extension  
Madison, WI 53706  
scdeller@wisc.edu

September 2017

This study is a joint effort of the Department of Agricultural and Applied Economics, University of Wisconsin-Madison and the Economic Development Administration University Center at the Center for Community Economic Development, University of Wisconsin-Extension. All opinions and conclusions expressed are those of the author and does not reflect those of the University of Wisconsin.

## A TRADE AREA ANALYSIS OF WISCONSIN RETAIL AND SERVICE MARKETS: UPDATED FOR 2016

### **Abstract**

For updated Trade Area Analysis (TAA) of Wisconsin counties we use the sales tax data as reported by the Wisconsin Department of Revenue for 2016. Only those counties that have elected to collect the optional county sales tax are included in the analysis. Because sales tax data are used one must keep in mind that *the analysis focuses only on taxable sales and may not reflect the total level of activity in the county*. Using Pull Factors and measures of Surplus and Leakage the relative strengths, and weaknesses, of local retail markets are identified. An example of how to explore changes in Pull Factors over time to identify strengths, weaknesses opportunities and potential threats is also provided.

### **Introduction**<sup>1</sup>

When a community is exploring economic development options one area of interest is local retail and service markets. Communities naturally ask “are local retail businesses reaching their fullest potential or are there weaknesses that need to be addressed?” In order to address these basic questions communities need to have basic insights into the relative strengths and weaknesses of local retail and service markets. One approach to identify these local strengths and weaknesses is to examine patterns in current sales activities using the tools of Trade Area Analysis.

The power of Trade Area Analysis (TAA) is the simplicity of the tools and the ease of interpretation. Community economic development practitioners have found that this simplicity has led to community leaders, businesses and concern citizens to adopt the tools and insights gained from TAA. The tools of Trade Area Analysis have proven to be a powerful foundation upon which to build a conversation about community economic development options. Indeed, some businesses have found these tools to be useful in developing business feasibility plans and have been accepted by a number of bank loan officers.

---

<sup>1</sup> For a more detailed discussion of alternative methods to analyze local retail and service markets, see the UW-Extension, Cooperative Extension program entitled “Downtown and Business District Market Analysis” by Bill Ryan and Matt Kures at <http://fyi.uwex.edu/downtown-market-analysis/>



It is important to note that the analysis presented here is at the county level which may not reflect the true market geographic area. Some businesses service the local community while other businesses draws customers from a much larger geographic area.

The weakness of Trade Area Analysis is the lack of geographic detail. The data, in the case of Wisconsin, are provided at the county level (and only for counties that have implemented the county option sales tax) which may or may not reflect the true geographic economic market

area. In our case here, from a purely economic perspective, the county is an arbitrary political boundary that may or may not reflect local retail and service markets.

Because the TAA reported here ignores the geographical or spatial element of the community's markets, local knowledge of shopping opportunities and behavior is extremely important. There may be very sensible reasons why TAA identifies a particular weakness or strength. For example, one community may be found to have large weaknesses in motor vehicle sales suggesting a market potential. But it may be the case that a neighboring community has a large concentration of automobile dealerships (a strength for that community) and hence easily explains the initial weakness for the community of interest. Knowledge of the condition of surrounding markets is vital to interpreting the results of the analysis presented here. The key is that TAA can serve as a foundation for a conversation about local retail and service markets.

What we will do in the following few pages is to review the tools of Trade Area Analysis and some of the simplifying assumptions that allows the analysis to move forward. Initially, residents in the local market or trade area of interest (e.g., the county) have the same tastes and preferences across the state. This assumption allows the community practitioner to compare the local market to a state average. We then show methods of estimating demand with unique trade area characteristics. As described above, the trade area is defined by the availability of data and the geographic area that the data are reported.

For this particular study we will use sales tax data reported by the Wisconsin Department of Revenue at the county level. Specifically, counties that have imposed the local

option sales tax are included in this analysis. Because the data is drawn from tax sales receipts only taxable sales are considered. If a particular item is not included in the tax base, then no data is available. Hence care must be taken and one must keep in mind that the analysis is of “taxable sales”. Still, the analysis provides one set of information that can be used to develop a picture of the local retail market.

### **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 that tastes and preferences are identical but also 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):

$$PS_s^i = P_s * PCS_{state}^i * \frac{PCI_s}{PCI_{state}} \quad (1)$$

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 (1). 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 (1) 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 is just divide actual sales by sales potential. Actual sales can be obtained 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 (Hustedde, Shaffer & Pulver, 1993; Stone & McConnen, 1983). 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:

$$TAC_s^i = \frac{AS_s^i}{PCS_{state}^i * \frac{PCI_s}{PCI_{state}}} \quad (2)$$

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

The number calculated from equation (2) 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:

$$PF_s^i = \frac{TAC_s^i}{P_s} \quad (3)$$

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*):

$$S/L_s^i = AS_s^i - PS_s^i \quad (4)$$


If actual sales (*AS*) is larger than Potential Sales (*PS*) and equation (4) 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 (4) 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.

### **Core Data for Analysis**

Before turning to the Trade Area Analysis for Wisconsin counties that have sales tax data, two core pieces of information are required. The first is the Index of Income and the second are per capita expenditure levels for the state along with the county population and per capita income (Table 1). For this analysis 62 counties have imposed a sales tax from which the data are derived. Please note that for this analysis, the state averages are based on the 62 counties that are contained in this analysis.

Fifty of the 62 have an Index of Income strictly below one, but several, including Barron and Pepin, are very close to being exactly at the state average. Forest County has the lowest Index of Income (0.775, which means that per capita income is only 77.5% of the state average) while Ozaukee has the highest Index of Income (1.649). Again note that here, the Wisconsin average is defined as including only those counties that have a county sales tax. Because of the relatively low income levels we would not expect spending in these counties to be on par with the state average and these averages are adjusted downward as described above. At the same time one would expect counties that have higher income levels (e.g., Dane, Ozaukee and Washington) to have higher spending levels than the state average and thus are adjusted upward.



There are several potential sources of data that can be used to undertake a Trade Area Analysis including sales estimates from private vendors such as Woods and Poole, Inc. or ESRI, federal government sources such as the Economic Census conducted every five years. While these data allow for comparisons across state lines many times they are estimates based on the Economic Census and the methods employed are unclear. For this study we use County Sales Tax data provided by the Wisconsin Department of Revenue. These data are not only timely, but the methods of collection and reporting are clearly documented. The weakness is that the data cover only taxable sales and are reported only at the county level.

Table 1: County Index of Income

	Population	Per Capita Income	Index of Income		Population	Per Capita Income	Index of Income
Adams	20,148	35,222	0.791	Lincoln	27,980	39,916	0.896
Ashland	15,843	36,003	0.808	Marathon	135,868	43,921	0.986
Barron	45,563	44,261	0.994	Marinette	40,884	39,681	0.891
Bayfield	14,977	41,869	0.940	Marquette	15,075	35,995	0.808
Buffalo	13,192	42,066	0.944	Milwaukee	957,735	43,020	0.966
Burnett	15,159	38,063	0.855	Monroe	45,549	37,678	0.846
Chippewa	63,531	42,518	0.955	Oconto	37,435	40,842	0.917
Clark	34,445	36,538	0.820	Oneida	35,567	46,451	1.043
Columbia	56,743	47,346	1.063	Ozaukee	87,850	73,462	1.649
Crawford	16,391	37,161	0.834	Pepin	7,290	44,487	0.999
Dane	523,643	53,705	1.206	Pierce	40,889	42,855	0.962
Dodge	88,502	41,055	0.922	Polk	43,441	41,777	0.938
Door	27,554	53,773	1.207	Portage	70,408	41,434	0.930
Douglas	43,601	38,603	0.867	Price	13,645	43,128	0.968
Dunn	44,497	36,316	0.815	Richland	17,495	37,838	0.849
Eau Claire	102,105	43,747	0.982	Rock	161,448	40,026	0.899
Florence	4,464	46,793	1.051	Rusk	14,124	35,984	0.808
Fond du Lac	101,973	43,764	0.983	Sauk	63,642	43,763	0.982
Forest	9,057	34,520	0.775	Sawyer	16,376	40,778	0.915
Grant	52,250	38,413	0.862	Shawano	41,304	37,167	0.834
Green	37,186	46,367	1.041	St. Croix	87,513	48,392	1.086
Green Lake	18,856	45,805	1.028	Taylor	20,455	35,931	0.807
Iowa	23,813	43,877	0.985	Trempealeau	29,550	42,272	0.949
Iron	5,794	42,744	0.960	Vernon	30,506	37,057	0.832
Jackson	20,554	40,316	0.905	Vilas	21,387	49,212	1.105
Jefferson	84,559	40,761	0.915	Walworth	102,804	42,446	0.953
Juneau	26,224	37,356	0.839	Washburn	15,552	43,727	0.982
Kenosha	168,437	41,373	0.929	Washington	133,674	51,110	1.147
La Crosse	118,212	44,557	1.000	Waupaca	51,945	42,216	0.948
Lafayette	16,829	42,640	0.957	Waushara	24,033	38,620	0.867
Langlade	19,223	39,900	0.896	Wood	73,435	41,883	0.940



Table 2: Per Capital Taxable Sales

Taxable Sales	Wisconsin
<u>Services</u>	
Construction of Buildings	49.06
Specialty Trade Contractors	277.20
Publishing Industries (except Internet)	52.55
Telecommunications	927.86
Credit Intermediation and Related Activities	78.53
Rental and Leasing Services	357.53
Professional, Scientific, and Technical Services	385.59
Administrative and Support Services	134.30
Amusement, Gambling, and Recreation Industries	125.13
Accommodation	384.40
Food Services and Drinking Places	1,470.46
Repair and Maintenance	358.41
Personal and Laundry Services	353.28
<u>Retail (Wholesale)</u>	
Merchant Wholesalers, Durable Goods	854.78
Merchant Wholesalers, Nondurable Goods	147.70
Motor Vehicle and Parts Dealers	1,944.38
Furniture and Home Furnishings Stores	255.15
Electronics and Appliance Stores	223.90
Building Material and Garden Equipment and Supplies Dealers	1,010.60
Food and Beverage Stores	567.49
Health and Personal Care Stores	173.92
Gasoline Stations	395.11
Clothing and Clothing Accessories Stores	416.31
Sporting Goods, Hobby, Book, and Music Stores	215.38
General Merchandise Stores	1,418.17
Miscellaneous Store Retailers	855.24
Nonstore Retailers	372.58

The second set of data is the state per capita expenditure levels (Table 2). It is vital to recall that the data are drawn from taxable sales, not total sales. As a result the estimated potential sales as well as surplus/leakage levels are conservative.

For retail sectors, the largest single category of expenditures is motor vehicle and parts dealers with a state-wide per capita expenditure level of \$1,944.38 in 2016. This result is largely attributed to the expensiveness of

automobiles. The second largest single category of retail expenditures is general merchandise stores with \$1,418.17. There are two potential reasons why this category is as large as it is: (1) the growing popularity of “big-box” stores such as Wal-Mart and Target is drawing a larger share of consumer dollars and (2) many of the “super” stores have expanded into carrying groceries which is in direct competition to more traditional food stores. Many of these “super stores” have become one-stop centers where customers can purchase food, clothing, hardware, toys, electronics, and even have prescriptions filled in one store. Some of these

stores have even entered the retail gasoline market thus placing pressure on smaller gasoline retailers. Indeed, even more traditional gasoline retailers have expanded into offering more items associated with general merchandise and food stores. Many gasoline stations have turned into general convenience stores that compete directly with grocery stores.

For the services sectors food services and drinking places (restaurants and taverns/bars) at \$1,470.46 followed by telecommunication services which would include wireless and internet service providers. Also note that in Wisconsin the typical per person spending on professional, scientific and technical services is now slightly higher than accommodation (hotels, motels, B&Bs) (\$385.59 vs \$384.41). In 2009, for example, per capital spending on professional, scientific and technical services was \$238.40 which represents a 61.7% increase. While a small part of this increase is due to changes in sales tax laws, this large increase is more a reflection of the growth in this sector and its growing importance to the economy.

### **Trade Area Analysis Results**

In addition to the tabular presentation of the results for Trade Area Captured, Pull Factors, Potential Sales and Surplus/Leakage We have presented the Pull Factors in map form. It is important to note that there are at least two reasons why there may be no data for a particular category for any given county. First, there are 10 counties in Wisconsin that do not impose the local option sales tax and hence there is no data available. The second is that there are no businesses within the particular category that are reporting taxable sales.

The volume of results prevents a discussion of all of the results and we have left it to the reader to draw the relevant information for their own purposes. For brevity we have reported only the key variables of interest: Pull Factors and the Surplus/Leakage that is tied to those Pull Factors. The reader must keep in mind to consider both Leakages as well as Surpluses when developing strategies to build local retail and service markets. Naturally, the tendency is to want to focus on addressing weaknesses in the markets, but there may be solid reasons why such weaknesses exist ranging from lack of market size (small populations such as in Florence county may be a real barrier to the creation of certain types of businesses) to spatial competition from neighboring communities. But focusing attention on sectors that have a revealed strength (i.e.,

large Pull Factors and Surpluses) can build on existing markets. For example, a community that has a strong tourism and recreation sector may find that the further promotion of tourism and recreation can have strong positive impacts. In other words, it can be just as valuable to build on existing strengths as it is to address weaknesses.

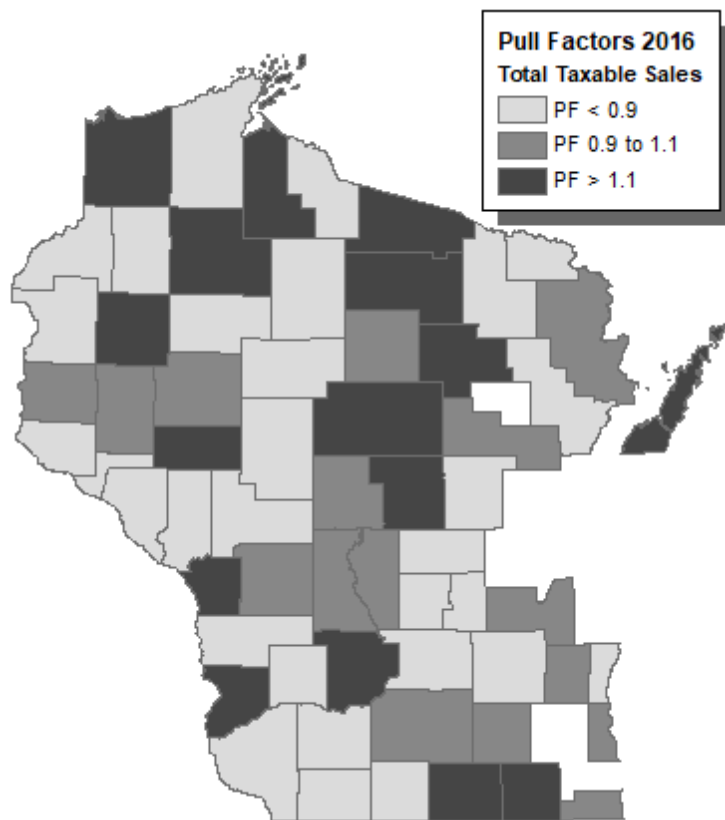
A four step process then comes to light when considering the analysis presented here.

1. Determine which sectors are strengths and weaknesses based on the relative size of the Pull Factor.
2. This determination should first be based on the county in isolation then in comparison to similar counties.
3. Determine the dollar value of the strength or weaknesses based on the Surplus or Leakage.
4. Identify strategies to build on strengths and address weaknesses.

One must also consider the relative size of any Leakage before considering it as a business opportunity. For example, the Leakage may not be sufficiently large to justify new business enterprises. Rather, a viable alternative to new business formation is for existing businesses within the sector to rethink their business strategies. The challenge here is to use the analysis as an “excuse” or “reason” to engage the community in a conversation about the strengths and weaknesses of local retail and service markets and strategies that can be pursued to build on those strengths and address the weaknesses.

Consider the Pull Factor and corresponding Surplus/Leakage calculation for total taxable sales (Table 3). In the strictest interpretation 42 of the 62 counties in this analysis, or 67.7%, have a Pull Factor less than one, suggesting that these 42 counties are experiencing Leakages of taxable retail and service activities. The three counties with the smallest Pull Factors are Florence (PF=0.358), Lafayette (PF=0.526) and Buffalo (PF=0.547) while the counties with the largest Pull Factors are Door (PF=1.414), Oneida (PF=1.443), Sawyer (PF=1.448) and Sauk (PF=1.768).

Counties with the lowest Pull Factors tend to be smaller more rural counties that are within a reasonable driving distance to a larger county. The counties with the largest Pull Factors tend to be those that have large tourism and recreational elements to the regional economy. Sauk County, for example, is largely explained by the presence of the recreational industry associated with the Wisconsin Dells.



While the Pull Factor is a useful indicator of relative strengths and weaknesses, the more relevant measure is the dollar gain (surplus) or loss (leakage) associated with the Pull Factor. Specifically, in the case of a

## How Close to One is Close Enough?

While the Pull Factor has a definitive threshold of one, there remains room for interpretation. For example, Dane County, where Madison a regional hub is located, has a Pull Factor of 1.069 and Fond du Lac, another potential regional hub, has a Pull Factor of 0.978. In the strictest sense one could conclude that Dane County is doing better than expected while Fond du Lac is doing poorer than expected but in reality a more reasonable interpretation would be that both counties are performing on par with the state average.

Some have suggested that when interpreting Pull Factors more reasonable thresholds might be above 1.1 and below 0.9 and Pull Factors between those two ranges are close enough to 1.0 to be acceptable.

Others point to the size of the corresponding Surplus and/or Leakage as the relevant metric of interest. For small counties, a very small Pull Factor may translate into a very modest dollar Leakage, too small for businesses to consider addressing. Whereas for a large county, a Pull Factor slightly smaller than one can lead to leakages in the millions of dollars. For example, Fond du Lac has a Pull Factor of 0.978, very close to one, but a leakage of over \$30 million.

Table 3: Summary of Total Taxable Sales Analysis

	Pull Factor	Suplus - Leakage		Population	Suplus - Leakage
Adams	0.948	(11,391,836)	Lincoln	0.935	(22,341,523)
Ashland	1.183	32,438,420	Marathon	1.103	190,141,193
Barron	1.163	101,604,482	Marinette	1.094	47,358,084
Bayfield	0.835	(32,064,223)	Marquette	0.781	(36,821,171)
Buffalo	0.547	(77,974,460)	Milwaukee	0.952	(618,395,219)
Burnett	0.796	(36,563,021)	Monroe	1.035	18,502,177
Chippewa	0.993	(6,017,909)	Oconto	0.661	(160,590,611)
Clark	0.683	(123,500,562)	Oneida	1.443	226,649,203
Columbia	0.881	(98,961,134)	Ozaukee	0.687	(626,417,027)
Crawford	1.203	38,242,618	Pepin	0.683	(31,897,287)
Dane	1.069	598,092,963	Pierce	0.596	(219,279,538)
Dodge	0.873	(143,467,108)	Polk	0.879	(67,900,031)
Door	1.414	190,325,296	Portage	1.141	127,918,543
Douglas	1.122	63,663,737	Price	0.723	(50,513,286)
Dunn	0.940	(29,933,098)	Richland	0.884	(23,815,272)
Eau Claire	1.269	372,142,443	Rock	1.104	209,094,800
Florence	0.358	(41,576,100)	Rusk	0.631	(58,064,343)
Fond du Lac	0.978	(30,598,538)	Sauk	1.768	662,888,203
Forest	0.718	(27,346,350)	Sawyer	1.448	92,767,851
Grant	0.851	(92,629,806)	Shawano	0.901	(46,999,146)
Green	0.802	(105,632,541)	St. Croix	0.911	(117,407,288)
Green Lake	0.791	(55,974,358)	Taylor	0.826	(39,738,456)
Iowa	0.861	(45,101,294)	Trempealeau	0.810	(73,703,638)
Iron	0.875	(9,558,118)	Vernon	0.786	(74,885,035)
Jackson	0.865	(34,636,695)	Vilas	1.137	44,574,376
Jefferson	0.957	(46,289,998)	Walworth	1.131	177,789,084
Juneau	0.904	(29,202,262)	Washburn	0.900	(20,971,892)
Kenosha	1.042	91,584,351	Washington	0.940	(127,366,301)
La Crosse	1.283	461,156,315	Waupaca	0.843	(106,723,528)
Lafayette	0.526	(105,350,768)	Waushara	0.754	(70,799,772)
Langlade	1.168	39,964,069	Wood	0.991	(8,497,662)

Number in parentheses are negative or leakage values.

Leakage the size of the lost potential sales or revenue is a solid approximation of business market potential. If, for example, there is a \$1 million leakage in food services (restaurants) and a new business might be able to capture 10% of that leakage is \$100,000 in sales sufficient to start a new restaurant? Or more likely, can existing restaurants justify an expansion to capture some of those lost dollars.

Consider Adams County with a Pull Factor of 0.948 which is fairly close to one, but total leakages of taxable sales is about \$11.4 million or Jefferson County with a Pull Factor of 0.957 but a total leakage of almost \$46.3 million. Here local knowledge of the market area becomes vital. Adams County, is what one might consider a “remote” county in that it is not adjacent to larger urban hubs that can present significant geographic competition. Jefferson County, on the other hand is situated between Dane County and the city of Madison and Waukesha County with numerous medium to larger cities. In addition, the commuting patterns for Jefferson County suggests that there is a significant share of local residents that commute out of the county for work. Research has suggested that out-commuting can reduce retail sales by as much as 50% for the home county.

### **Trade Area Analysis Clusters**

One of the advantages of using the county sales tax as a means to conduct a Trade Area Analysis is that the tax has been in place in numerous counties for a number of years.<sup>2</sup> This

It is vital to think of the insights gained by Trade Area Analysis as a first step in understanding the strengths and weaknesses of local retail and service markets. One must have an appreciation of local market conditions when interpreting Pull Factors and Surplus/Leakage calculations.

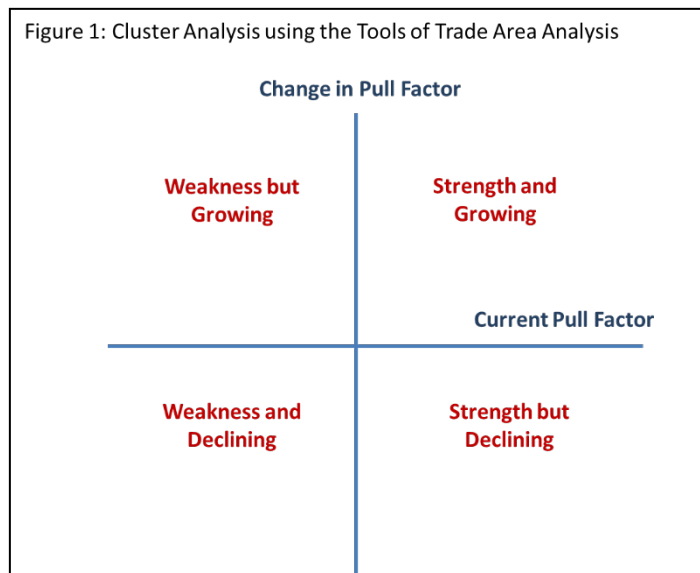
<sup>2</sup> This includes an analysis of:

- 2015 <https://aae.wisc.edu/pubs/misc/docs/deller.2016.trade%20area%20analysis%20wisconsin%20retail%20markets.pdf>
- 2014 <https://aae.wisc.edu/pubs/misc/docs/deller.2015.trade%20area%20analysis%20wisconsin%20retail%20markets.pdf>
- 2013 [www.aae.wisc.edu/pubs/misc/docs/deller.trade%20area%20analysis%20WI%20retail%20markets%20update%2008.14.pdf](http://www.aae.wisc.edu/pubs/misc/docs/deller.trade%20area%20analysis%20WI%20retail%20markets%20update%2008.14.pdf)
- 2012 <http://www.aae.wisc.edu/pubs/misc/docs/deller.trade%20area%20analysis%20WI%20retail%20markets%2008.13.pdf>
- 2011 [www.aae.wisc.edu/pubs/sps/pdf/stpap567.pdf](http://www.aae.wisc.edu/pubs/sps/pdf/stpap567.pdf)
- 2010 <http://www.aae.wisc.edu/pubs/sps/pdf/stpap550.pdf>
- 2009 <http://www.aae.wisc.edu/pubs/sps/pdf/stpap550.pdf>
- 2006 <http://www.aae.wisc.edu/pubs/sps/pdf/stpap512.pdf>
- 2005 <http://www.aae.wisc.edu/pubs/sps/pdf/stpap503.pdf>
- 2004 <http://www.aae.wisc.edu/pubs/misc/docs/deller.TAcounty.%202006.pdf>
- 1999 <http://www.aae.wisc.edu/pubs/sps/pdf/stpap428.pdf>

Inconsistency in the release of the data by the Department of Revenue has limited the ability to conduct the analysis on a consistent timely annual basis. The data can also be obtained by contacting the author.

allows us to track the performance of local retail and service markets over time. There is, however, a problem: the Wisconsin Department of Revenue has not been consistent in how the data are reported.<sup>3</sup> Staffing limitations have hindered the timeliness of the releases and changes in the industrial classification systems have changed how the data has been grouped. This latter problem is most evident in the classification of the service sectors. But for retail the ability to compare over time can add an important dimension to community discussions.

There are numerous approaches to conduct comparisons over time but given the range of different metrics developed through Trade Area Analysis it is possible to overwhelm the discussion with too much data. One method to present a significant amount of data in a relatively easy to interpret visual representation is to build on the simple economic cluster analysis offered by Harvard business economist Michael Porter. But rather than looking at location quotient over time and industry sizes we can substitute Pull Factors and size metrics such as Trade Area Captured or Potential Sales. Consider the outline in Figure 1 where we plot the current value of the Pull Factor (horizontal axis) and the Change in the Pull Factor over time (vertical axis).



There are four possible combinations: (1) the Pull Factor is less than one and declining which is the lower left hand quadrant and retail sectors falling into this category could be considered a “weakness and declining”; (2) the Pull Factor is less than one but is increasing over time which is the upper left hand quadrant and could interpreted as a “weakness

but growing”; (3) the Pull Factor is great than one, hence a strength, but is declining over time, the lower right hand side quadrant; and finally (4) the Pull Factor is greater than one and

---

<sup>3</sup> Over the past few years there has been more consistency in the reporting of these data and in time, if the current reporting system remains in place, this problem will be minimized.

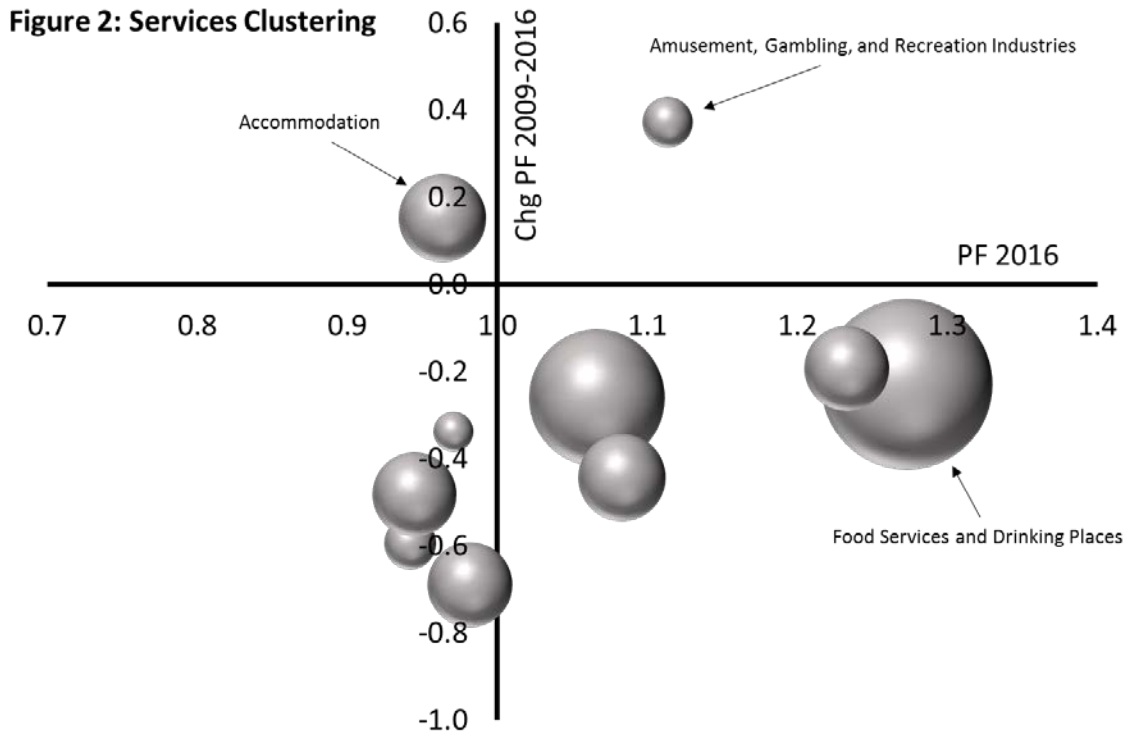


Table 4: Services Industry Cluster Analysis, La Crosse County

	Pull Factor 2016	Change in Pull Factor 2009 to 2016	Potential Sales 2016 (MM\$)
<u>Strength and Growing</u>			
Amusement, Gambling, and Recreation Industries	1.114	0.372	\$ 14.80
<u>Strength and Declining</u>			
Food Services and Drinking Places	1.273	-0.230	\$ 173.88
Repair and Maintenance	1.233	-0.194	\$ 42.38
Professional, Scientific, and Technical Services	1.083	-0.443	\$ 45.60
Telecommunications	1.067	-0.260	\$ 109.72
<u>Weakness and Growing</u>			
Accommodation	0.963	0.152	\$ 45.45
<u>Weakness and Declining</u>			
Rental and Leasing Services	0.982	-0.689	\$ 42.28
Credit Intermediation and Related Activities	0.971	-0.339	\$ 9.29
Personal and Laundry Services	0.945	-0.483	\$ 41.77
Administrative and Support Services	0.942	-0.594	\$ 15.88



increasing over time, retail sectors falling into this category would be considered a strength and growing.

Consider, for example, the service and retail markets of La Crosse County (Figure 2 and Table 3). The change in the Pull Factor is from 2009 to 2014 and the relative size of the market is based on potential sales (eq.(1)); the larger the “bubble” the greater the potential sales. For taxable services there is only one sector that is a strength and growing, amusement, gambling and recreational services, and it is relatively modest in size with respect to potential sales. One sector that is a strength but declining and has large potential sales is food services and drinking places. Accommodations, however, is weaknesses but is showing signs of becoming stronger. The data behind the analysis presented in Figure 2 are provided in Table 4.

The comparable analysis for retail is provided in Figure 3 and Table 5. What is of most interest in the retail sector analysis is that the Pull Factor for all but one (furniture and home furnishings stores) is greater than one, suggesting that 10 of the 11 retail sectors included in the analysis are performing better than might be expected ( $PF > 1$ ). This is clearly a reflection of La Crosse, particularly the cities of La Crosse and Onalaska, being a regional hub for retail. In addition, there is significant in-commuting into La Crosse for employment which helps explain its relative strength. The part of the analysis that is more concerning, however, is that the Pull Factor is declining for almost all of the 11 retail sectors examined. Only gasoline stations is showing any increase in relative strength. This declining pattern in Pull Factors is perhaps a cause for concern and warrants further investigation.

**Figure 3: Retail Clustering**

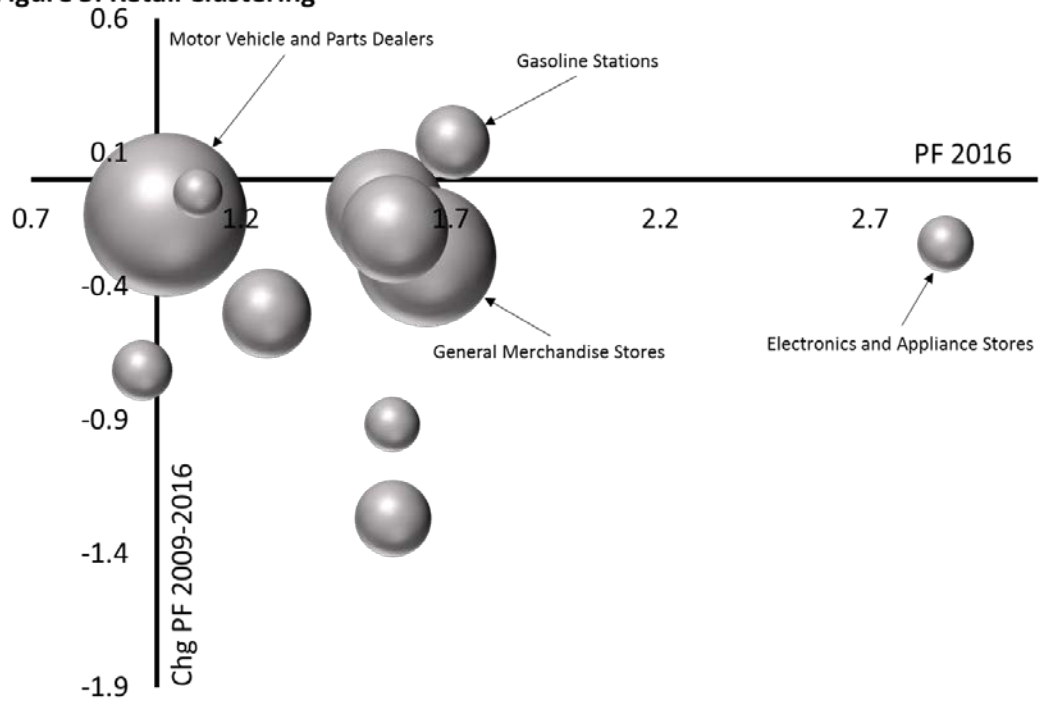


Table 5: Retail Industry Cluster Analysis, La Crosse County

	Pull Factor 2016	Change in Pull Factor 2009 to 2016	Potential Sales 2016 (MM\$)
<u>Strength and Growing</u>			
Gasoline Stations	1.705	0.137	\$ 46.72
<u>Strength and Declining</u>			
Electronics and Appliance Stores	2.880	-0.242	\$ 26.48
General Merchandise Stores	1.643	-0.291	\$ 167.69
Miscellaneous Store Retailers	1.566	-0.185	\$ 101.13
Clothing and Clothing Accessories Stores	1.564	-1.268	\$ 49.23
Sporting Goods, Hobby, Book, and Music Stores	1.561	-0.917	\$ 25.47
Building Material, Garden Equipment and Supplies Dealers	1.544	-0.110	\$ 119.50
Food and Beverage Stores	1.262	-0.503	\$ 67.10
Health and Personal Care Stores	1.097	-0.052	\$ 20.57
Motor Vehicle and Parts Dealers	1.020	-0.132	\$ 229.92
<u>Weakness and Growing</u>			
<u>Weakness and Declining</u>			
Furniture and Home Furnishings Stores	0.965	-0.716	\$ 30.17

## **Strategies for Enhancing Retail and Service Markets**

Individual business owners do not want to “bet the farm” based on a simple Pull Factor and corresponding measure of Leakage or Surplus. Rather, these tools can be powerful in the initial identification of market ideas and concepts. In a sense, these tools can be used in the “plan-to-plan” stage of the business planning process and can provide useful insights.

Beyond aiding businesses in the initial planning stages there exists a wide range of potential strategies can put in place to build on strengths of the local retail 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. Disconnects are when the goods and services are available but local customers, both residents and businesses, are not making local purchases.

Because these are broad approaches and specific strategies will be applicable to both we will suggest several possible specific strategies across both approaches. For a more focused discussion see the newsletter *Downtown Economics* produced by the Center for Community

Economic Development at the University of Wisconsin-Extension<sup>4</sup> as well as the collection of resources at the USDA National Rural Resource Library and the references therein.<sup>5</sup>

Examples of specific activities a community can undertake to increase the inflow or re-circulation of dollars include:

1. Develop market information to help retail and service businesses in identifying market potentials and formulate business plans. The TAA presented here is a small piece of such market information.
2. Promote community and regional commercial space necessary to attract new retail and service businesses.
3. Encourage mixed uses for downtown real estate, including housing, lodging, office space, and social spaces. Recognize the shift away from traditional retail spaces to services oriented businesses.
4. Work to ensure that retail and service development policies aim at complementary growth where local firms are harmonized and not competitive.
5. Match the preferences of local market segments with the assets and amenities of the community, such as tourism linked to agriculture and local foods.
6. Help businesses explore all market segments available including but not limited to local residents, in commuters, second home-owners, visitors, among others. Expand purchases by non-local people through appropriate advertising and promotions.
  - a. Help develop an online presence for each new or existing business including e-retailing and online marketing including the use of social media.
  - b. Coordinated advertising can build on economies of size and scope.
  - c. Coordinate business hours.
  - d. Sponsor downtown activities such as sidewalk sales or art fairs.
  - e. Organize farmers markets to attract customers to the downtown.
  - f. Providing convenient parking or public transit.

---

<sup>4</sup> <http://www.uwex.edu/ces/cced/publicat/letstalk.html>

<sup>5</sup> <http://www.nal.usda.gov/ric/ricpubs/downtown.html>

7. Ensure that key public services (e.g., fire and police, water and sewer, general administration) are more than satisfactory.
8. Aid businesses in developing employee-training programs to improve quality of service.
9. Recognize the important role of transfers such as retirement benefits, and unemployment compensation as a flow of funds into the community.
10. Consider initiating a business retention and expansion program to support existing businesses first. These business visitation programs can build a stronger sense of community and help identify potential problem areas.
11. Encourage collective action through the formation of organizations such as Chamber of Commerce or Merchants Association. These types of organizations can provide a mechanism for local businesses to network and create learning opportunities that fosters innovation.
12. Create a positive business climate where local government regulators work with businesses to satisfy local rules and regulations rather than create barriers of red tape.

These broad based strategies are clearly not exhaustive and are meant to only introduce the idea that effective 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 require a multi-prong approach with overlapping strategies. Finally, strategies need to be constantly evaluated and adjusted to reflect changing markets.

While the tools of Trade Area Analysis are a powerful indicator of retail market strengths and weaknesses, they should not be substituted for detailed business feasibility studies. While businesses have found measures of Surplus/Leakage to be a reasonable first approximation of potential revenues more detailed market analysis is required before specific business investments are made. Again, these tools are most appropriate in the business “plan-to-plan” phase of business planning.

## Conclusions

The intent of this applied research project is to: (1) introduce one set of tools, specifically Trade Area Analysis and market threshold analysis, to community development practitioners; (2) apply the tools to a set of data for Wisconsin counties; and (3) outline a set of simple strategies to help build on Surpluses and address Leakages. The tools offered here as well as the analysis should be considered one step in developing a complete understanding of the local retail market. The tools can be used to stimulate discussions within the community about the strengths and weaknesses of the local retail markets as well as a simple set of tools that potential businesses can use in the initial planning, or “plan-to-plan”, stages in business development.

## References

Berry, B. and W. Garrison. (1958a). "A Note on Central Place Theory and the Range of a Good," *Economic Geography*, 34:304-311.

Berry, B. and W. Garrison. (1958b). "Recent Developments in Central Place Theory," *Proceedings of the Regional Science Association*, 4:107-121.

Deller, Steven C., James C. McConnon, Jr., John Holden & Kenneth Stone. 1991. The measurement of a community's retail market. *Journal of the Development Society* 22#2: 68-83.

Deller, Steven C., Matt Kures and William F. Ryan. 2006. An analysis of retail and service sector count data: Identification of market potential for Wisconsin counties. Department of Agricultural and Applied Economics Staff Paper No. 492. University of Wisconsin-Madison/Extension. (January).

<http://www.aae.wisc.edu/pubs/sps/pdf/stpap492.pdf>

Deller, Steven C. and William F. Ryan, 1996. Community market analysis series: Retail and service demand thresholds for Wisconsin. Center for Community Economic Development, Department of Agricultural Economics, University of Wisconsin-Madison/Extension. Staff Paper No. 96.1, (April), 20p. <http://www.aae.wisc.edu/cced/961.pdf>

Goldstucker, Jac L., Danny N. Bellenger, Thomas J. Stanley & Ruth L. Otte. 1978. *New Developments in Retail Trading Area Analysis and Site Selection*. Atlanta, GA: College of Business Administration, Georgia State Univ.

Hustedde, Ron, Ron Shaffer & Glen Pulver. 1993. *Community Economic Analysis: A How To Manual*. (RRD141) Ames, IA: North Central Regional Center for Rural Development.

Shaffer, Ron, Steven Deller & David Marcouiller. 2004. *Community Economic Development: Linking Theory and Practice*. Cambridge: Blackwell.

Stone, Kenneth E. & James C. McConnon. 1983. Analyzing Retail Sales Potential for Counties and Towns. Paper presented at the American Agricultural Economics Assn. Meetings. Ames, IA: Iowa State University.

Taxable Sales in Thousands of Dollars 2016

	Specialty Trade Contractors	Merchant Wholesalers,		Merchant Wholesalers, Nondurable Goods	Motor Vehicle and Parts Dealers	Furniture and Home Furnishings Stores		Electronics and Appliance Stores	Building Material and Garden Equipment and Supplies Dealers		Food and Beverage Stores	Health and Personal Care Stores	Gasoline Stations	Clothing and Accessories Stores		Sporting Goods, Hobby, Book, and Music Stores	General Merchandise Stores	Miscellaneous Store Retailers	Nonstore Retailers
		Durable Goods	Wholesalers, Nondurable Goods			Home Furnishings Stores	Material and Garden Equipment and Supplies Dealers		Clothing Accessories Stores	Sporting Goods, Hobby, Book, and Music Stores									
Adams	-	3,487.6	8,973.0	3,187.2	32,600.8	1,844.4	913.1	11,723.4	-	-	12,441.4	477.8	890.7	6,661.3	13,813.6	12,094.5			
Ashland	-	4,775.5	16,153.2	1,780.4	27,952.5	1,292.4	1,215.4	12,927.3	11,993.3	-	4,012.9	3,584.1	1,095.9	42,053.0	10,134.2	5,604.0			
Barron	-	10,008.4	31,472.4	7,074.1	108,979.1	7,422.7	9,052.5	86,059.2	25,024.9	5,206.5	23,046.6	9,380.1	8,146.0	118,789.8	62,084.0	19,948.3			
Bayfield	-	6,246.3	9,209.2	1,988.6	20,119.8	1,035.8	742.5	18,950.3	8,472.0	-	5,898.8	2,436.5	1,376.7	2,758.7	8,513.2	4,504.1			
Buffalo	-	2,588.0	7,035.3	1,179.8	21,385.6	-	2,919.0	9,985.0	-	-	-	382.6	1,369.0	1,866.1	8,452.4	4,243.3			
Burnett	-	1,195.3	14,907.8	1,156.7	22,526.8	944.1	1,179.3	14,176.3	-	-	-	889.3	2,931.5	7,648.0	13,750.6	4,667.4			
Chippewa	-	16,542.5	52,926.1	10,930.8	163,610.2	8,918.0	21,108.6	36,256.5	30,381.4	5,181.5	27,326.4	6,535.0	20,811.6	105,851.1	74,426.1	20,256.6			
Clark	1,128.0	5,502.6	15,861.9	4,654.8	61,082.4	3,519.4	14,261.8	24,525.5	8,032.4	-	14,292.1	1,808.2	1,495.4	6,428.2	23,877.4	10,087.3			
Columbia	1,930.9	24,268.2	50,722.9	10,842.4	142,406.0	10,213.4	6,625.2	36,154.8	23,415.4	7,972.1	47,203.2	9,879.6	3,906.8	52,436.3	49,352.2	19,707.6			
Crawford	-	4,223.4	9,360.4	1,913.2	27,243.5	1,427.9	2,247.4	7,967.5	8,272.0	-	-	2,622.1	-	47,262.2	14,790.9	37,176.2			
Dane	82,258.0	185,094.3	781,216.4	91,185.0	1,129,434.1	249,611.1	155,792.9	571,492.6	447,215.3	150,135.2	149,050.4	323,066.7	181,471.3	765,005.6	570,367.4	275,963.7			
Dodge	1,482.9	16,251.6	92,120.7	16,908.7	175,590.1	18,533.3	6,299.3	65,799.1	30,107.3	8,818.4	43,563.5	5,834.0	15,792.9	114,726.4	67,803.9	29,127.9			
Door	3,360.7	17,162.9	20,768.6	5,480.1	85,978.6	11,593.1	4,172.6	37,949.8	27,308.1	4,151.8	14,223.6	19,731.2	9,201.4	55,165.6	52,809.9	11,939.0			
Douglas	1,549.5	14,761.5	40,120.5	8,454.0	70,377.5	4,592.9	4,464.7	59,357.1	24,145.6	5,080.0	26,235.2	3,570.7	6,509.6	64,100.5	35,772.6	11,348.0			
Dunn	-	7,110.3	26,151.5	5,065.3	80,422.0	5,741.7	6,721.5	22,016.4	16,523.9	4,181.6	23,102.8	4,117.6	7,054.6	86,082.8	33,532.4	11,391.3			
Eau Claire	4,616.2	25,867.5	108,181.5	22,866.6	186,790.9	18,852.0	82,902.2	190,999.1	58,321.4	17,450.8	33,187.1	74,296.5	77,852.2	196,259.1	114,388.7	31,835.4			
Florence	-	783.7	1,478.8	-	5,066.4	-	-	1,457.9	-	-	-	-	-	-	1,705.6	2,028.3			
Fond du Lac	4,991.2	73,520.5	84,502.6	11,111.8	159,661.9	31,431.6	17,883.1	98,901.1	58,592.3	18,033.6	41,983.4	27,378.5	13,513.1	148,600.5	70,325.8	30,636.2			
Forest	-	2,056.2	4,017.3	875.3	18,908.5	983.4	-	12,228.8	-	-	-	799.8	-	-	4,618.7	3,906.4			
Grant	1,013.6	13,413.1	22,244.8	4,069.0	91,589.1	5,727.9	3,179.0	81,598.4	20,107.9	4,682.4	21,369.5	7,495.0	4,255.4	47,819.0	35,864.7	13,019.9			
Green	-	8,525.8	24,877.8	4,585.1	86,366.3	7,297.0	6,651.5	34,611.6	18,890.2	4,032.9	8,258.5	5,074.9	2,901.3	42,120.1	35,156.0	13,826.6			
Green Lake	-	5,631.2	16,341.2	2,993.1	46,481.7	7,058.4	2,021.2	15,540.3	-	-	-	1,727.8	3,562.7	24,927.0	14,855.3	4,903.2			
Iowa	-	5,867.6	15,054.8	1,960.5	52,898.0	5,113.1	4,041.4	25,762.2	7,372.7	-	13,765.6	1,503.1	1,039.8	29,954.2	12,813.4	17,480.9			
Iron	-	760.6	4,250.7	1,020.3	8,489.6	-	-	13,604.1	-	-	-	-	-	-	5,161.3	2,067.0			
Jackson	-	8,092.9	17,699.4	2,259.5	39,868.6	788.0	1,918.5	10,722.9	-	-	10,367.8	916.7	-	43,135.9	12,761.4	4,812.8			
Jefferson	2,457.2	23,693.5	60,026.8	10,397.9	161,290.8	18,717.2	6,803.8	84,879.7	32,552.3	13,097.8	44,719.1	72,603.5	8,664.7	91,586.3	59,484.4	25,643.4			
Juneau	-	5,943.7	12,870.1	3,052.5	56,375.9	1,974.4	2,514.5	13,358.9	9,878.6	3,937.5	27,672.6	1,456.0	3,169.3	12,440.1	18,235.2	7,235.9			
Kenosha	8,341.6	34,002.4	111,254.3	54,991.5	270,604.0	41,399.5	37,930.7	123,519.2	107,830.6	37,677.3	57,914.8	193,396.6	50,228.6	230,971.4	109,651.6	51,779.2			
La Crosse	7,072.7	50,731.4	106,815.4	13,814.2	234,442.0	29,114.2	76,239.1	184,531.8	84,656.0	22,570.3	79,662.5	76,975.7	39,759.6	275,483.4	158,370.5	41,238.7			
Lafayette	-	4,809.0	6,476.3	1,823.8	34,827.0	1,778.6	-	12,200.4	-	-	-	605.5	-	6,959.4	7,796.8	4,044.4			
Langlade	-	4,014.8	16,821.4	2,220.7	49,504.0	3,236.8	4,329.8	39,374.3	6,972.9	-	8,934.4	1,912.7	3,259.6	56,419.9	10,689.8	6,909.7			



Taxable Sales in Thousands of Dollars 2016

Construction of Buildings	Specialty Trade Contractors	Merchant Wholesalers, Durables, Nondurable Goods		Motor Vehicle and Parts Dealers	Furniture and Home Furnishings Stores		Electronics and Appliance Stores		Building Material and Garden Equipment and Supplies Dealers		Food and Beverage Stores	Health and Personal Care Stores	Gasoline Stations	Clothing and Accessories Stores		Sporting Goods, Hobby, Book, and Music Stores	General Merchandise Stores	Miscellaneous Store Retailers	Nonstore Retailers
		Durable Goods	Nondurable Goods		Stores	Stores	Stores	Stores	Stores	Stores									
Lincoln	-	5,659.9	17,616.3	1,969.7	66,822.5	5,590.5	8,457.1	25,940.9	15,825.7	3,328.6	14,368.4	1,509.8	9,056.0	29,751.9	15,458.8	14,529.6			
Marathon	6,272.9	28,455.2	146,640.2	19,594.2	302,137.0	35,985.8	36,009.5	207,398.5	56,175.1	19,062.3	61,803.1	63,237.7	44,112.7	269,748.8	121,159.8	46,822.1			
Marquette	3,534.3	13,235.5	24,501.8	4,625.0	89,994.1	4,478.4	7,200.3	57,484.0	31,398.4	4,365.9	18,023.5	5,304.8	6,782.0	63,502.2	36,821.5	12,168.8			
Marquette	-	8,842.7	9,611.7	895.8	30,947.8	1,912.6	3,644.4	5,447.5	5,265.7	-	-	376.0	1,648.1	2,209.4	10,720.4	4,443.7			
Milwaukee	34,464.3	260,380.5	766,440.5	124,196.7	1,432,738.1	242,590.0	180,352.8	568,912.8	615,362.0	242,101.8	246,197.6	539,871.7	153,464.0	1,136,925.4	700,446.4	275,118.5			
Monroe	3,454.8	13,517.7	33,929.4	6,648.8	87,975.0	4,331.6	5,130.7	36,986.5	12,862.0	3,093.3	35,821.2	3,772.3	4,252.7	92,015.6	28,546.7	14,227.1			
Oconto	2,256.0	10,511.0	15,997.5	3,833.9	77,148.8	3,956.9	4,113.6	24,875.1	10,872.5	-	17,633.7	1,296.9	3,937.2	7,763.6	17,173.5	11,265.3			
Oneida	2,735.1	6,870.6	32,453.9	6,148.9	121,270.3	16,590.0	12,680.5	103,947.0	36,536.3	7,306.0	11,236.2	13,457.4	13,695.9	108,371.8	34,400.1	19,362.9			
Ozaukee	5,204.7	19,047.8	67,204.8	13,268.6	209,223.4	40,646.6	27,641.5	86,462.7	61,274.7	21,063.4	32,607.4	33,662.2	23,688.0	146,657.4	84,346.4	39,296.7			
Pepin	-	1,880.4	7,085.9	799.5	13,597.8	-	1,803.5	10,618.9	-	-	-	-	-	-	8,389.3	2,188.6			
Pierce	-	6,530.5	36,646.2	4,998.9	52,887.3	3,761.0	3,379.6	19,713.1	18,224.9	1,005.2	16,365.2	4,081.0	3,208.0	6,261.0	25,739.9	12,210.6			
Polk	2,100.2	3,330.7	25,482.5	4,608.7	70,421.0	7,065.9	4,621.3	80,201.5	23,924.8	1,668.8	13,578.9	1,871.2	5,926.9	55,538.1	37,035.3	13,132.7			
Portage	2,366.6	20,255.5	56,542.7	9,235.3	149,409.6	20,761.7	22,441.6	95,417.4	32,302.8	9,137.8	41,554.2	19,578.2	16,601.0	142,524.5	58,219.1	26,952.3			
Price	-	1,946.6	11,245.6	915.0	27,407.6	1,961.2	-	12,266.3	-	-	7,521.7	577.7	2,046.7	4,699.9	10,884.4	4,654.5			
Richland	-	2,520.5	8,674.6	2,717.3	39,637.8	1,794.1	2,510.1	8,929.5	-	-	10,876.4	1,628.3	1,554.5	40,560.2	12,027.6	3,834.9			
Rock	4,165.0	38,948.6	124,309.1	18,802.8	335,878.6	26,019.5	34,759.5	174,406.9	115,788.3	25,684.7	81,342.4	51,530.7	40,194.9	252,099.0	133,392.1	48,025.9			
Rusk	-	2,105.3	6,231.2	884.0	25,986.4	-	-	13,963.7	-	-	-	644.4	-	-	9,630.6	3,379.7			
Sauk	2,922.8	22,275.0	64,032.6	13,432.8	144,620.0	17,892.3	8,012.4	160,990.7	27,036.4	19,511.5	32,414.9	73,119.0	24,280.7	126,221.8	58,107.7	31,853.1			
Sawyer	-	3,634.2	11,975.5	1,981.5	49,450.5	6,431.1	2,965.3	26,268.9	8,684.6	-	9,335.7	5,232.2	3,479.3	54,986.9	14,120.7	4,949.7			
Shawano	-	7,359.7	15,234.2	3,703.6	97,639.7	4,209.7	5,022.7	30,944.8	16,455.6	4,132.8	13,239.6	3,925.1	5,664.0	52,632.7	29,738.3	9,090.7			
St. Croix	2,764.7	16,824.4	60,883.2	14,985.1	156,910.9	13,242.2	11,350.3	135,487.5	55,778.4	9,381.0	53,580.7	12,262.3	10,681.7	147,792.1	72,018.1	33,003.5			
Taylor	-	2,422.1	11,727.6	1,819.5	41,540.5	1,863.0	6,872.1	20,526.9	-	-	8,349.1	1,281.2	2,300.0	32,589.9	8,069.8	5,423.1			
Trempealeau	-	7,484.2	21,947.4	2,731.4	52,829.9	20,857.5	5,391.4	28,669.8	6,883.1	624.2	20,419.3	1,634.8	2,491.6	7,973.3	28,071.0	10,465.6			
Vernon	-	5,877.3	16,944.2	5,550.7	56,305.1	3,335.9	4,676.7	12,703.6	7,051.3	-	12,976.0	1,769.2	1,920.5	32,906.3	21,160.7	16,081.7			
Vilas	-	9,196.2	15,628.7	5,599.3	63,002.4	12,443.6	8,019.8	26,571.3	24,090.7	3,865.5	13,730.3	3,945.8	8,914.3	5,006.2	22,372.9	7,911.8			
Walworth	3,172.2	25,977.1	62,843.2	12,860.3	231,569.4	26,933.2	28,001.3	123,612.2	39,872.2	16,163.3	49,822.7	29,117.4	16,837.2	157,271.1	77,078.0	32,534.0			
Washington	-	2,878.0	13,448.9	1,566.4	44,398.1	2,259.2	2,136.0	19,495.9	-	-	7,301.9	2,354.2	5,825.8	3,992.1	20,218.7	6,266.4			
Washington	9,367.8	22,017.5	112,268.4	20,310.6	296,109.0	41,218.0	23,352.8	180,441.0	72,244.1	26,195.1	56,928.6	34,489.2	22,025.8	236,990.0	127,919.5	99,835.9			
Waupaca	3,625.7	11,059.5	22,044.9	6,854.5	115,527.9	6,658.3	7,095.9	18,706.3	29,661.6	9,266.7	30,403.6	5,098.4	4,910.9	68,007.4	44,973.1	15,351.9			
Waushara	982.2	4,572.2	16,719.7	3,029.0	44,043.9	4,277.5	1,370.4	10,198.0	9,692.2	-	11,307.5	1,095.8	3,270.1	3,362.6	19,055.1	5,655.7			
Wood	1,278.2	18,897.1	47,791.3	6,420.2	156,979.7	17,450.7	9,208.0	57,517.3	39,866.6	8,378.7	31,284.6	10,672.2	12,724.3	123,702.9	77,304.3	31,960.8			

Taxable Sales in Thousands of Dollars 2016

	Publishing Industries (except Internet)	Telecommunications	Credit Intermediation and Related Activities	Rental and Leasing Services	Professional, Scientific, and Technical Services	Administrative and Support Services	Amusement, Gambling, and Recreation Industries	Accommodation and Drinking Places	Food Services	Repair and Maintenance	Personal and Laundry Services	Total Taxable Sales
Adams	-	22,361.9	691.1	3,197.1	3,685.6	1,764.4	-	42,471.4	14,983.5	6,549.9	3,731.6	208,545.2
Ashland	-	15,758.6	605.8	3,377.3	3,126.8	1,974.4	-	6,891.3	21,627.5	4,376.8	6,904.5	209,219.0
Barron	1,589.7	51,406.2	3,599.3	11,936.6	10,337.2	7,053.0	7,264.6	12,679.5	55,055.9	16,071.9	17,930.5	726,619.2
Bayfield	-	17,634.3	-	3,119.7	4,262.2	2,394.6	5,044.5	11,892.2	18,274.7	4,973.1	2,431.8	162,279.7
Buffalo	-	10,995.3	-	1,217.7	3,934.4	630.3	-	-	11,335.0	2,566.9	1,927.9	94,013.5
Burnett	-	16,528.5	-	1,972.1	1,943.8	1,888.3	-	4,750.7	20,759.2	6,434.1	2,010.5	142,260.2
Chippewa	2,677.3	52,029.6	4,585.2	16,614.7	16,902.5	6,752.7	7,449.6	11,963.6	64,443.5	29,340.6	17,322.9	831,144.5
Clark	1,104.4	21,908.4	894.1	4,895.2	4,062.3	975.6	-	-	20,951.1	10,761.2	4,445.8	266,555.5
Columbia	2,571.7	59,953.9	2,265.7	11,701.3	16,049.7	4,520.7	12,008.9	22,744.6	65,174.8	20,554.9	19,085.5	733,668.7
Crawford	-	15,223.8	-	2,788.4	3,564.3	538.0	-	8,160.7	21,058.1	5,413.4	5,767.6	227,020.9
Dane	64,622.7	638,195.4	46,392.3	248,692.9	361,129.8	127,656.0	52,337.3	250,139.1	993,658.0	193,738.6	228,380.6	9,313,842.3
Dodge	4,102.3	73,813.1	5,460.0	31,953.5	26,885.0	6,729.8	6,217.7	5,927.6	68,336.8	27,042.9	17,397.2	982,626.1
Door	896.4	32,377.8	2,378.7	10,725.4	13,946.1	7,457.3	9,905.2	82,342.2	82,655.0	9,195.2	16,653.0	649,529.5
Douglas	1,138.0	48,470.3	3,237.1	13,154.6	15,131.0	3,137.1	3,399.5	10,199.7	69,953.2	20,278.0	16,771.6	585,309.9
Dunn	1,256.5	36,855.6	2,504.8	5,823.7	7,786.7	4,599.0	4,321.2	4,900.1	41,714.8	13,787.0	8,127.5	470,892.5
Eau Claire	5,926.5	98,375.7	14,037.9	26,389.2	54,902.1	14,050.4	19,342.2	28,474.9	176,456.4	47,576.3	26,318.4	1,756,517.2
Florence	-	3,599.8	-	1,056.1	-	-	-	-	5,985.1	-	-	23,161.8
Fond du Lac	3,753.0	82,474.5	9,774.7	99,571.9	27,759.2	8,268.7	21,179.8	18,985.0	124,215.1	41,662.2	23,812.5	1,352,523.8
Forest	-	6,155.9	-	924.3	1,093.0	508.2	-	2,156.8	7,458.4	1,744.8	1,113.7	69,549.4
Grant	1,537.1	45,117.3	2,166.6	6,539.5	7,833.2	2,693.5	3,139.3	3,831.8	45,274.4	23,460.7	10,374.7	529,416.8
Green	1,487.6	32,394.8	1,668.5	9,357.7	10,076.5	3,453.8	2,285.0	5,165.9	34,875.2	13,224.0	11,575.3	428,739.7
Green Lake	-	15,784.9	1,323.1	6,763.0	5,149.2	1,420.4	1,397.7	9,378.9	15,005.4	4,637.1	4,803.0	211,705.9
Iowa	1,338.3	22,644.8	1,022.4	3,508.1	8,731.1	1,984.5	-	6,180.9	24,354.0	10,784.8	3,543.5	278,719.9
Iron	-	6,739.1	-	3,930.1	1,429.2	-	-	4,482.9	12,059.0	2,156.4	1,047.4	67,197.7
Jackson	-	19,619.3	946.9	4,687.7	3,424.9	3,330.0	-	6,416.7	21,062.0	5,374.9	3,972.6	222,179.2
Jefferson	2,973.9	70,569.1	5,132.0	24,085.8	24,155.8	7,190.3	8,180.7	7,965.4	101,696.0	32,888.3	20,460.6	1,021,916.4
Juneau	503.6	25,120.1	979.0	3,766.7	3,772.1	1,183.7	1,877.7	9,817.8	29,684.2	10,784.8	6,796.6	274,401.5
Kenosha	6,306.3	130,825.1	12,683.3	58,278.5	53,251.9	18,839.0	25,393.8	14,486.4	258,588.7	56,818.1	94,372.6	2,251,336.9
La Crosse	6,891.7	117,015.4	9,015.6	41,505.5	49,378.7	14,957.3	16,476.6	43,782.7	221,343.6	52,251.6	39,462.9	2,093,559.1
Lafayette	-	13,539.4	-	2,533.6	1,775.4	495.9	-	-	9,806.8	3,208.1	4,366.9	117,047.3
Langlade	-	13,544.5	-	3,028.9	4,825.3	1,456.7	2,648.8	-	24,554.8	9,490.7	3,522.6	277,673.3

Taxable Sales in Thousands of Dollars 2016

	Publishing Industries (except Internet)	Telecommunications	Credit Intermediation and Related Activities	Rental and Leasing Services	Professional, Scientific, and Technical Services	Administrative and Support Services	Amusement, Gambling, and Recreation Industries	Accommodation and Food Services Places	Food Services and Drinking Places	Repair and Maintenance	Personal and Laundry Services	Total Taxable Sales
Lincoln	997.2	17,840.7	1,372.3	7,575.7	6,635.0	2,197.8	4,012.5	2,877.9	29,498.4	10,466.4	4,435.8	323,795.4
Marathon	6,760.5	107,380.3	11,559.7	48,844.0	51,432.6	16,507.4	19,899.7	36,698.1	178,596.1	59,067.5	38,227.1	2,039,587.9
Marquette	1,103.6	34,634.3	2,784.2	11,866.9	11,629.0	2,719.2	2,385.0	10,489.0	48,048.9	14,014.5	27,062.3	550,157.2
Marquette	-	15,495.8	-	3,433.5	1,550.8	781.6	-	4,494.6	11,041.9	5,391.2	3,196.8	131,352.2
Milwaukee	58,179.3	823,360.5	97,572.2	406,762.2	464,683.2	130,778.3	77,309.8	313,635.7	1,574,399.4	281,048.8	403,689.6	12,150,937.1
Monroe	958.3	46,469.2	2,846.0	9,900.0	5,750.5	2,313.8	2,486.9	13,907.8	54,338.8	13,788.4	11,068.2	550,393.5
Oconto	682.6	32,713.9	1,652.3	9,121.0	3,620.6	2,785.3	4,758.9	2,549.3	31,036.2	5,642.6	6,055.4	313,253.7
Oneida	1,086.3	28,920.7	2,867.4	17,750.7	9,488.6	7,659.1	12,378.3	23,800.0	62,534.5	16,338.1	8,793.3	738,680.0
Ozaukee	6,249.3	83,225.0	12,174.1	34,048.6	42,705.9	21,044.2	11,108.6	14,608.0	130,490.5	33,101.4	73,664.5	1,373,716.3
Pepin	-	5,687.7	-	706.1	2,590.4	-	-	-	8,533.7	3,181.3	1,551.4	68,614.4
Pierce	1,069.6	34,349.0	2,108.5	12,904.9	5,571.0	1,996.3	1,475.2	-	33,220.1	7,370.7	8,718.8	323,796.6
Polk	1,130.8	38,344.8	2,438.0	11,499.6	11,244.2	5,014.9	3,285.6	4,299.8	43,285.0	16,990.1	6,575.9	494,557.1
Portage	3,906.4	64,316.5	6,396.5	29,977.2	29,038.5	8,220.9	4,940.4	18,741.4	100,754.3	23,834.6	18,629.0	1,032,056.2
Price	-	13,310.3	745.0	2,299.3	1,923.0	1,693.5	-	3,814.8	11,049.1	6,054.6	4,855.4	131,872.2
Richland	-	14,126.2	-	1,705.8	5,951.0	2,075.4	-	1,903.6	10,423.9	5,519.9	2,376.0	181,347.7
Rock	5,760.9	152,511.2	10,923.8	45,574.0	42,851.8	17,601.0	67,001.4	36,268.6	234,439.0	51,197.5	42,390.6	2,211,867.7
Rusk	-	10,966.9	-	1,569.2	1,494.2	2,392.0	-	4,773.1	9,031.9	4,674.0	1,723.8	99,450.2
Sauk	4,291.5	62,128.7	5,469.8	21,002.0	26,532.3	8,696.4	33,803.0	272,837.8	214,422.7	21,801.4	28,371.5	1,526,081.0
Sawyer	1,025.6	16,917.6	1,080.1	3,062.2	4,643.8	5,406.1	-	21,661.6	30,482.6	8,012.1	3,941.2	299,729.0
Shawano	843.3	34,382.0	1,445.4	9,071.1	4,942.5	4,969.5	3,146.0	6,361.1	43,811.2	14,131.3	6,677.9	428,774.7
St. Croix	1,904.0	94,236.2	9,241.0	35,606.9	27,968.1	15,355.1	16,115.1	12,684.1	122,383.3	30,383.5	22,269.1	1,195,092.6
Taylor	-	9,670.7	700.1	2,834.0	3,772.0	1,184.3	1,880.2	-	13,235.6	7,607.5	2,377.5	188,046.7
Trempealeau	1,032.5	33,229.5	1,699.4	3,872.5	6,030.2	1,819.3	-	2,685.6	27,227.3	11,362.2	5,995.8	313,428.9
Vernon	619.7	28,912.6	-	4,462.6	4,518.0	1,999.1	-	3,245.9	19,672.9	7,545.3	5,239.3	275,474.6
Vilas	-	18,722.4	1,684.6	7,294.2	6,118.7	4,394.7	8,243.2	29,063.9	44,361.7	12,517.3	8,067.5	370,767.1
Walworth	3,315.7	77,386.5	7,519.6	39,885.5	33,257.9	16,378.1	12,660.1	123,970.0	197,463.6	33,749.0	50,930.2	1,530,181.0
Washington	-	16,083.1	-	2,021.3	2,462.0	4,094.7	-	4,989.2	19,324.3	4,944.8	3,728.1	189,788.9
Washington	5,173.4	122,286.2	14,692.5	46,347.5	56,620.6	19,941.2	21,011.1	12,696.1	175,696.7	71,596.0	62,683.5	1,990,058.2
Waupaca	1,454.9	40,422.4	3,232.6	12,912.3	8,907.0	3,495.1	9,860.5	10,948.5	55,713.4	14,247.7	12,461.6	572,902.7
Waushara	-	21,388.7	-	5,419.4	3,131.2	796.3	5,017.7	7,647.5	19,994.2	10,392.3	4,437.6	216,856.9
Wood	7,655.7	71,667.8	4,016.8	20,321.2	19,972.2	5,439.2	5,179.9	14,368.6	83,387.3	47,454.6	13,824.2	944,724.3

	Building										Nonstore Retailers				
	Construction of Buildings	Specialty Trade Contractors	Merchant Wholesalers, Durable Goods	Merchant Wholesalers, Nondurable Goods	Motor Vehicle and Parts Dealers	Furniture and Home Furnishings Stores	Electronics and Appliance Stores	Material and Garden Equipment and Supplies Dealers	Food and Beverage Stores	Health and Personal Care Stores		Gasoline Stations	Clothing and Clothing Accessories Stores	Sporting Goods, Hobby, Book, and Music Stores	General Merchandise Stores
Adams	-	0.790	0.659	1.354	1.052	0.454	0.256	0.728	-	1.976	0.072	0.260	0.295	1.014	2.038
Ashland	-	1.346	1.476	0.941	1.123	0.396	0.424	0.999	1.650	0.793	0.672	0.397	2.316	0.925	1.175
Barron	-	0.797	0.813	1.058	1.238	0.643	0.893	1.881	0.974	1.288	0.498	0.835	1.850	1.603	1.183
Bayfield	-	1.601	0.765	0.956	0.735	0.288	0.236	1.332	1.060	1.061	0.416	0.454	0.138	0.707	0.859
Buffalo	-	0.749	0.661	0.641	0.883	-	1.046	0.793	-	-	0.074	0.510	0.106	0.793	0.914
Burnett	-	0.333	1.346	1.021	1.388	0.286	0.407	1.083	-	-	0.165	1.051	0.416	1.241	0.967
Chippewa	-	0.984	1.021	1.220	1.388	0.576	1.555	0.592	0.883	1.140	0.259	1.593	1.231	1.435	0.897
Clark	0.814	0.703	0.657	1.115	1.112	0.488	2.254	0.859	0.501	1.280	0.154	0.246	0.160	0.988	0.958
Columbia	0.653	1.452	0.984	1.217	1.214	0.664	0.491	0.593	0.684	1.981	0.393	0.301	0.613	0.957	0.877
Crawford	-	1.114	0.801	0.947	1.025	0.409	0.734	0.577	1.066	-	0.461	-	2.437	1.265	7.297
Dane	2.656	1.058	1.448	0.978	0.920	1.550	1.102	0.896	1.248	1.367	0.598	1.231	1.335	0.854	1.173
Dodge	0.371	0.719	1.321	1.403	1.107	0.890	0.345	0.798	0.650	0.622	1.352	0.172	0.899	0.992	0.958
Door	2.059	1.861	0.730	1.115	1.329	1.366	0.560	1.129	1.447	0.718	1.082	1.425	1.284	1.169	0.963
Douglas	0.836	1.409	1.242	1.515	0.958	0.476	0.528	1.554	1.126	0.773	1.757	0.227	0.800	1.196	0.806
Dunn	-	0.707	0.843	0.945	1.140	0.620	0.827	0.601	0.803	0.663	1.612	0.273	0.903	1.673	1.081
Eau Claire	0.938	0.931	1.262	1.544	0.958	0.737	3.692	1.885	1.025	1.001	0.838	1.780	3.604	1.380	0.852
Florence	-	0.603	0.369	-	0.556	-	-	0.308	-	-	-	-	-	0.425	1.161
Fond du Lac	1.015	2.647	0.987	0.751	0.820	1.230	0.797	0.977	1.031	1.035	1.061	0.656	1.046	0.821	0.821
Forest	-	1.057	0.670	0.844	1.386	0.549	-	1.724	-	-	-	0.274	-	0.769	1.494
Grant	0.458	1.074	0.578	0.611	1.045	0.498	0.315	1.792	0.786	0.597	1.200	0.400	0.438	0.748	0.776
Green	-	0.795	0.752	0.802	1.148	0.739	0.767	0.885	0.860	0.599	0.540	0.315	0.348	0.767	1.062
Green Lake	-	1.048	0.986	1.045	1.233	1.427	0.466	0.793	-	-	-	0.214	0.853	0.906	0.679
Iowa	-	0.902	0.751	0.566	1.160	0.854	0.770	1.087	0.554	-	1.485	0.154	0.206	0.900	2.000
Iron	-	0.494	0.894	1.242	0.785	-	-	2.421	-	-	-	-	-	1.085	0.998
Jackson	-	1.569	1.113	0.822	1.102	0.166	0.461	0.570	-	-	1.411	0.118	-	1.635	0.694
Jefferson	0.647	1.105	0.908	0.910	1.072	0.948	0.393	1.085	0.741	0.973	1.463	2.254	0.520	0.835	0.889
Juneau	-	0.975	0.685	0.940	1.318	0.352	0.511	0.601	0.792	1.029	3.185	0.159	0.669	0.399	0.970
Kenosha	1.087	0.784	0.832	2.380	0.890	1.037	1.083	0.781	1.215	1.385	0.937	2.969	1.491	1.041	0.888
La Crosse	1.219	1.548	1.057	0.791	1.020	0.965	2.880	1.544	1.262	1.097	1.705	1.564	1.561	1.643	0.936
Lafayette	-	1.077	0.470	0.766	1.112	0.433	-	0.749	-	-	-	0.090	-	0.305	0.674
Langlade	-	0.841	1.143	0.873	1.479	0.737	1.123	2.263	0.714	-	1.313	0.267	0.879	2.310	1.077

	Construction of Buildings	Specialty Trade Contractors	Merchant Wholesalers, Durable Goods	Merchant Wholesalers, Nondurable Goods	Motor Vehicle and Parts Dealers	Furniture and Home Furnishings Stores	Electronics and Appliance Stores	Building Material and Garden Equipment and Supplies Dealers	Food and Beverage Stores	Health and Personal Care Stores	Gasoline Stations	Clothing and Accessories Stores	Sporting Goods, Hobby, Book, and Music Stores	General Merchandise Stores	Miscellaneous Store Retailers	Nonstore Retailers
Lincoln	-	0.814	0.822	0.532	1.371	0.874	1.506	1.024	1.112	0.763	1.450	0.145	1.677	0.837	0.721	1.555
Marathon	0.954	0.766	1.281	0.990	1.160	1.053	1.201	1.532	0.739	0.818	1.168	1.134	1.529	1.420	1.057	0.938
Marquette	1.978	1.311	0.787	0.860	1.271	0.482	0.883	1.562	1.519	0.689	1.252	0.350	0.865	1.229	1.182	0.897
Marquette	-	2.619	0.923	0.498	1.307	0.615	1.336	0.442	0.762	-	-	0.074	0.628	0.128	1.029	0.979
Milwaukee	0.759	1.016	0.969	0.909	0.797	1.028	0.871	0.609	1.172	1.505	0.674	1.402	0.770	0.867	0.885	0.798
Monroe	1.828	1.266	1.030	1.168	1.174	0.441	0.595	0.950	0.588	0.462	2.353	0.235	0.512	1.684	0.866	0.991
Oconto	1.340	1.105	0.545	0.756	1.156	0.452	0.535	0.717	0.558	-	1.300	0.091	0.533	0.159	0.585	0.881
Oneida	1.503	0.668	1.024	1.122	1.682	1.753	1.527	2.773	1.736	1.133	0.767	0.872	1.714	2.060	1.084	1.401
Ozaukee	0.732	0.474	0.543	0.620	0.743	1.100	0.852	0.591	0.745	0.836	0.570	0.558	0.759	0.714	0.681	0.728
Pepin	-	0.932	1.139	0.744	0.961	-	1.106	1.443	-	-	-	-	-	-	1.347	0.807
Pierce	-	0.599	1.090	0.860	0.691	0.375	0.384	0.496	0.816	0.147	1.053	0.249	0.379	0.112	0.765	0.833
Polk	1.051	0.295	0.732	0.766	0.889	0.680	0.507	1.948	1.035	0.236	0.844	0.110	0.675	0.961	1.063	0.865
Portage	0.737	1.116	1.010	0.955	1.173	1.242	1.530	1.442	0.869	0.802	1.606	0.718	1.177	1.534	1.039	1.105
Price	-	0.532	0.996	0.469	1.067	0.582	-	0.919	-	-	1.441	0.105	0.719	0.251	0.963	0.946
Richland	-	0.612	0.683	1.238	1.372	0.473	0.754	0.595	-	-	1.852	0.263	0.486	1.924	0.946	0.693
Rock	0.585	0.969	1.002	0.878	1.191	0.703	1.070	1.190	1.406	1.018	1.419	0.853	1.286	1.225	1.075	0.889
Rusk	-	0.666	0.639	0.525	1.171	-	-	1.211	-	-	-	0.136	-	-	0.987	0.795
Sauk	0.953	1.285	1.198	1.455	1.190	1.122	0.572	2.548	0.762	1.794	1.312	2.809	1.803	1.423	1.087	1.367
Sawyer	-	0.875	0.935	0.895	1.696	1.681	0.883	1.734	1.021	-	1.576	0.838	1.078	2.586	1.101	0.886
Shawano	-	0.770	0.517	0.728	1.457	0.479	0.651	0.888	0.841	0.689	0.972	0.274	0.763	1.077	1.009	0.708
St. Croix	0.593	0.638	0.749	1.067	0.849	0.546	0.533	1.410	1.034	0.567	1.426	0.310	0.522	1.096	0.886	0.932
Taylor	-	0.530	0.832	0.747	1.295	0.443	1.860	1.231	-	-	1.281	0.187	0.647	1.393	0.572	0.882
Trempealeau	-	0.963	0.916	0.659	0.969	2.915	0.859	1.012	0.433	0.128	1.843	0.140	0.413	0.200	1.170	1.002
Vernon	-	0.835	0.781	1.481	1.141	0.515	0.823	0.495	0.490	-	1.294	0.167	0.351	0.914	0.975	1.701
Vilas	-	1.404	0.774	1.604	1.371	2.064	1.516	1.113	1.797	0.941	1.471	0.401	1.752	0.149	1.107	0.899
Walworth	0.660	0.957	0.750	0.889	1.216	1.078	1.277	1.249	0.717	0.949	1.287	0.714	0.798	1.132	0.920	0.891
Washington	-	0.680	1.031	0.695	1.496	0.580	0.625	1.264	-	-	1.210	0.370	1.772	0.184	1.549	1.102
Washington	1.245	0.518	0.856	0.993	0.993	1.053	0.680	1.164	0.830	0.982	0.939	0.540	0.667	1.090	0.975	1.747
Waupaca	1.501	0.810	0.524	0.943	1.207	0.530	0.644	0.376	1.062	1.082	1.563	0.249	0.463	0.974	1.068	0.837
Waushara	0.961	0.792	0.939	0.984	1.087	0.805	0.294	0.484	0.820	-	1.373	0.126	0.729	0.114	1.069	0.728
Wood	0.377	0.987	0.810	0.630	1.169	0.991	0.596	0.824	1.017	0.698	1.147	0.371	0.856	1.263	1.309	1.242

Pull Factor 2016

	Publishing Industries (except Internet)	Telecommunications	Credit Intermediation and Related Activities	Rental and Leasing Services	Professional, Scientific, and Technical Services	Administrative and Support Services	Amusement, Gambling, and Recreation Industries	Accommodation	Food Services and Drinking Places	Repair and Maintenance	Personal and Laundry Services	Total Taxable Sales
Adams	-	1.513	0.552	0.561	0.600	0.825	-	6.935	0.640	1.147	0.663	0.948
Ashland	-	1.326	0.602	0.738	0.633	1.148	-	1.400	1.149	0.954	1.526	1.183
Barron	0.668	1.224	1.012	0.737	0.592	1.160	1.282	0.729	0.827	0.990	1.121	1.163
Bayfield	-	1.350	-	0.620	0.785	1.267	2.864	2.198	0.883	0.986	0.489	0.835
Buffalo	-	0.951	-	0.273	0.819	0.377	-	-	0.619	0.575	0.438	0.547
Burnett	-	1.375	-	0.426	0.389	1.085	-	0.954	1.090	1.386	0.439	0.796
Chippewa	0.840	0.925	0.963	0.766	0.723	0.829	0.982	0.513	0.723	1.350	0.809	0.993
Clark	0.744	0.836	0.403	0.485	0.373	0.257	-	-	0.504	1.063	0.445	0.683
Columbia	0.811	1.071	0.478	0.543	0.690	0.558	1.591	0.981	0.735	0.951	0.896	0.881
Crawford	-	1.200	-	0.570	0.676	0.293	-	1.553	1.047	1.105	1.194	1.203
Dane	1.948	1.089	0.936	1.102	1.483	1.506	0.662	1.031	1.070	0.856	1.024	1.069
Dodge	0.957	0.975	0.852	1.096	0.855	0.614	0.609	0.189	0.570	0.925	0.604	0.873
Door	0.513	1.049	0.911	0.902	1.087	1.669	2.380	6.440	1.690	0.771	1.417	1.414
Douglas	0.573	1.382	1.091	0.974	1.038	0.618	0.719	0.702	1.259	1.497	1.256	1.122
Dunn	0.659	1.095	0.879	0.449	0.557	0.944	0.952	0.351	0.782	1.060	0.634	0.940
Eau Claire	1.125	1.057	1.783	0.736	1.420	1.043	1.541	0.739	1.197	1.324	0.743	1.269
Florence	-	0.827	-	0.630	-	-	-	-	0.868	-	-	0.358
Fond du Lac	0.713	0.887	1.242	2.780	0.719	0.615	1.689	0.493	0.843	1.160	0.673	0.978
Forest	-	0.945	-	0.368	0.404	0.539	-	0.799	0.723	0.694	0.449	0.718
Grant	0.649	1.079	0.612	0.406	0.451	0.445	0.557	0.221	0.683	1.453	0.652	0.851
Green	0.731	0.902	0.549	0.676	0.675	0.664	0.472	0.347	0.613	0.953	0.846	0.802
Green Lake	-	0.877	0.869	0.976	0.689	0.545	0.576	1.258	0.526	0.667	0.701	0.791
Iowa	1.086	1.040	0.555	0.418	0.965	0.630	-	0.685	0.706	1.283	0.428	0.861
Iron	-	1.306	-	1.977	0.667	-	-	2.098	1.475	1.082	0.533	0.875
Jackson	-	1.137	0.648	0.705	0.477	1.333	-	0.897	0.770	0.806	0.604	0.865
Jefferson	0.731	0.983	0.845	0.871	0.810	0.692	0.845	0.268	0.894	1.186	0.748	0.957
Juneau	0.436	1.231	0.567	0.479	0.445	0.401	0.682	1.161	0.918	1.368	0.875	0.904
Kenosha	0.767	0.901	1.032	1.042	0.883	0.897	1.297	0.241	1.124	1.013	1.708	1.042
La Crosse	1.109	1.067	0.971	0.982	1.083	0.942	1.114	0.963	1.273	1.233	0.945	1.283
Lafayette	-	0.906	-	0.440	0.286	0.229	-	-	0.414	0.556	0.767	0.526
Langlade	-	0.848	-	0.492	0.727	0.630	1.229	-	0.970	1.538	0.579	1.168

Pull Factor 2016

	Publishing Industries (except Internet)	Telecommunications	Credit Intermediation and Related Activities	Rental and Leasing Services	Professional, Scientific, and Technical Services	Administrative and Support Services	Amusement, Gambling, and Recreation Industries	Accommodation	Food Services and Drinking Places	Repair and Maintenance	Personal and Laundry Services	Total Taxable Sales
Lincoln	0.757	0.767	0.697	0.845	0.686	0.653	1.279	0.299	0.800	1.165	0.501	0.935
Marathon	0.960	0.864	1.099	1.020	0.996	0.917	1.187	0.713	0.907	1.230	0.808	1.103
Marinette	0.577	1.025	0.973	0.911	0.828	0.556	0.523	0.749	0.897	1.074	2.103	1.094
Marquette	-	1.371	-	0.788	0.330	0.478	-	0.960	0.616	1.235	0.743	0.781
Milwaukee	1.197	0.959	1.343	1.230	1.303	1.053	0.668	0.882	1.158	0.848	1.235	0.952
Monroe	0.473	1.300	0.941	0.719	0.387	0.447	0.516	0.939	0.959	0.998	0.813	1.035
Oconto	0.378	1.027	0.613	0.743	0.274	0.604	1.108	0.193	0.615	0.459	0.499	0.661
Oneida	0.557	0.840	0.984	1.339	0.663	1.538	2.667	1.669	1.147	1.229	0.671	1.443
Ozaukee	0.821	0.619	1.070	0.657	0.764	1.082	0.613	0.262	0.612	0.637	1.439	0.687
Pepin	-	0.842	-	0.271	0.923	-	-	-	0.797	1.219	0.603	0.683
Pierce	0.517	0.941	0.683	0.918	0.367	0.378	0.300	-	0.574	0.523	0.627	0.596
Polk	0.528	1.014	0.762	0.789	0.716	0.916	0.644	0.275	0.722	1.159	0.457	0.879
Portage	1.135	1.058	1.244	1.280	1.150	0.935	0.603	0.744	1.046	1.015	0.805	1.141
Price	-	1.086	0.718	0.487	0.377	0.954	-	0.751	0.569	1.279	1.040	0.723
Richland	-	1.024	-	0.321	1.038	1.040	-	0.333	0.477	1.036	0.453	0.884
Rock	0.756	1.133	0.959	0.879	0.766	0.903	3.691	0.650	1.099	0.985	0.827	1.104
Rusk	-	1.036	-	0.385	0.340	1.561	-	1.088	0.538	1.143	0.428	0.631
Sauk	1.306	1.071	1.114	0.939	1.100	1.036	4.320	11.352	2.332	0.973	1.284	1.768
Sawyer	1.302	1.216	0.917	0.571	0.803	2.685	-	3.759	1.383	1.491	0.744	1.448
Shawano	0.466	1.075	0.534	0.736	0.372	1.074	0.730	0.480	0.865	1.144	0.548	0.901
St. Croix	0.381	1.068	1.238	1.048	0.763	1.203	1.355	0.347	0.875	0.892	0.663	0.911
Taylor	-	0.632	0.540	0.480	0.593	0.534	0.911	-	0.546	1.286	0.408	0.826
Trempealeau	0.701	1.277	0.772	0.386	0.558	0.483	-	0.249	0.660	1.130	0.605	0.810
Vernon	0.465	1.228	-	0.492	0.462	0.587	-	0.333	0.527	0.830	0.584	0.786
Vilas	-	0.854	0.908	0.863	0.672	1.385	2.788	3.200	1.277	1.478	0.966	1.137
Walworth	0.644	0.851	0.977	1.139	0.880	1.245	1.033	3.292	1.371	0.961	1.472	1.131
Washington	-	1.135	-	0.370	0.418	1.997	-	0.850	0.861	0.904	0.691	0.900
Waushara	0.642	0.859	1.220	0.845	0.957	0.949	1.095	0.215	0.779	1.302	1.157	0.940
Waupaca	0.562	0.885	0.836	0.734	0.469	0.529	1.601	0.579	0.770	0.807	0.717	0.843
Waushara	-	1.106	-	0.727	0.390	0.285	1.924	0.955	0.653	1.392	0.603	0.754
Wood	2.110	1.119	0.741	0.823	0.750	0.587	0.600	0.541	0.821	1.918	0.567	0.991

Surplus/Leakage 2016 in Thousand of Dollars

	Specialty Trade Contractors		Merchant Wholesalers, Durable Goods		Merchant Wholesalers, Nondurable Goods		Motor Vehicle and Parts Dealers		Furniture and Home Furnishings Stores		Electronics and Appliance Stores		Building Material and Garden Equipment and Supplies Dealers		Food and Beverage Stores		Health and Personal Care Stores		Gasoline Stations		Clothing and Accessories Stores		Sporting Goods, Hobby, Book, and Music Stores		General Merchandise Stores		Miscellaneous Store Retailers		Nonstore Retailers	
	Construction of Buildings	Specialty Trade Contractors	Merchant Wholesalers, Durable Goods	Merchant Wholesalers, Nondurable Goods	Motor Vehicle and Parts Dealers	Furniture and Home Furnishings Stores	Electronics and Appliance Stores	Building Material and Garden Equipment and Supplies Dealers	Food and Beverage Stores	Health and Personal Care Stores	Gasoline Stations	Clothing and Accessories Stores	Sporting Goods, Hobby, Book, and Music Stores	General Merchandise Stores	Miscellaneous Store Retailers	Nonstore Retailers														
Adams	(781.6)	(928.6)	(4,645.2)	834.1	1,623.6	(2,220.6)	(2,654.0)	(4,377.1)	(9,041.1)	(2,770.9)	6,146.6	(6,154.8)	(2,540.7)	(15,932.6)	188.3	6,158.6														
Ashland	(628.2)	1,227.9	5,207.2	(111.0)	3,053.7	(1,974.9)	(1,651.7)	(14.0)	4,726.3	(2,227.2)	(1,046.7)	(1,747.0)	(1,662.2)	23,892.5	(817.6)	832.9														
Barron	(2,221.2)	(2,541.6)	(7,227.5)	387.2	20,948.6	(4,129.0)	(1,084.3)	40,304.9	(668.2)	(2,667.7)	5,158.2	(9,468.3)	(1,605.3)	54,582.7	23,363.7	3,079.8														
Bayfield	(690.7)	2,344.0	(2,824.3)	(90.6)	(7,252.7)	(2,556.2)	(2,409.5)	4,723.3	482.9	(2,448.4)	336.6	(3,424.3)	(1,655.4)	(17,206.0)	(3,526.6)	(741.1)														
Buffalo	(611.2)	(865.5)	(3,613.9)	(660.3)	(2,838.2)	(3,178.7)	129.6	(2,605.4)	(7,070.1)	(2,166.8)	(4,922.4)	(4,803.9)	(1,314.3)	(15,802.0)	(2,202.5)	(398.4)														
Burnett	(635.5)	(2,395.4)	3,835.4	(756.5)	(2,659.7)	(2,361.0)	(1,721.0)	1,085.5	(7,351.0)	(2,252.9)	(5,118.1)	(4,503.4)	141.5	(10,722.4)	2,672.4	(158.8)														
Chippewa	(2,975.1)	(267.3)	1,090.4	1,974.1	45,699.6	(6,554.8)	7,531.1	(25,028.1)	(4,032.5)	(5,365.4)	3,366.2	(18,711.0)	7,750.4	19,850.3	22,563.0	(2,337.4)														
Clark	(258.2)	(2,329.5)	(8,289.7)	481.7	6,144.8	(3,689.8)	7,935.7	(4,028.6)	(8,001.9)	(4,914.1)	3,128.4	(9,954.6)	(4,590.1)	(33,641.9)	(287.0)	(439.9)														
Columbia	(1,028.1)	7,549.4	(832.1)	1,934.2	25,133.8	(5,175.6)	(6,878.9)	(24,798.0)	(10,812.2)	(2,517.7)	23,372.7	(15,229.8)	(9,083.7)	(33,098.9)	(2,230.1)	(2,764.1)														
Crawford	(670.9)	432.8	(2,328.4)	(106.5)	654.9	(2,061.2)	(814.3)	(5,852.0)	511.8	(2,378.3)	(5,403.0)	(3,070.8)	(2,945.3)	27,869.2	3,095.9	32,081.3														
Dane	51,284.0	10,086.3	241,551.9	(2,063.3)	(98,140.4)	88,523.3	14,436.2	(66,545.0)	88,929.6	40,330.5	(100,401.0)	60,768.2	45,490.2	(130,353.9)	30,417.5	40,735.5														
Dodge	(2,519.0)	(6,359.8)	22,395.0	4,860.9	16,984.9	(2,279.5)	(11,964.3)	(16,636.7)	(16,184.0)	(5,368.6)	11,333.8	(28,125.3)	(1,776.2)	(955.9)	(1,958.8)	(1,264.1)														
Door	1,728.7	7,942.3	(7,664.6)	567.2	21,301.8	3,105.9	(3,275.0)	4,337.7	8,431.2	(1,633.4)	1,080.9	5,883.1	2,037.0	7,992.1	24,361.7	(454.4)														
Douglas	(304.3)	4,287.1	7,821.1	2,873.0	(3,094.0)	(5,048.4)	(3,995.7)	21,169.9	2,701.8	(1,491.9)	11,305.3	(12,160.4)	(1,629.0)	10,512.3	3,456.0	(2,730.6)														
Dunn	(1,779.8)	(2,946.0)	(4,858.8)	(293.0)	9,883.0	(3,514.8)	(1,401.2)	(14,646.6)	(4,064.0)	(2,128.0)	8,768.8	(10,985.7)	(759.2)	34,633.6	2,505.7	(2,125.4)														
Eau Claire	(303.6)	(1,930.0)	22,463.3	8,055.4	(8,192.1)	(6,734.5)	60,449.7	89,655.7	1,412.7	98	(6,434.8)	32,548.3	56,253.5	54,043.8	28,625.2	(5,527.3)														
Florence	(230.1)	(516.2)	(2,529.7)	(692.6)	(4,051.7)	(1,196.5)	(1,050.0)	(3,281.2)	(2,661.2)	(815.6)	(1,852.8)	(1,952.3)	(1,010.0)	(6,650.5)	(2,305.0)	281.1														
Fond du Lac	75.9	45,748.1	(1,138.0)	(3,686.0)	(35,144.7)	5,868.2	(4,549.2)	(2,350.6)	1,735.1	608.4	2,397.4	(14,331.9)	(8,066.0)	6,513.8	(15,360.1)	(6,692.7)														
Forest	(344.3)	110.6	(1,982.3)	(161.4)	5,261.2	(807.5)	(1,571.5)	5,135.5	(3,983.2)	(1,220.7)	(2,773.2)	(2,122.3)	(1,511.7)	(9,954.0)	(1,384.1)	1,291.3														
Grant	(1,197.1)	922.7	(16,271.2)	(2,586.2)	3,976.6	(5,769.0)	(6,909.6)	36,061.4	(5,463.1)	(3,154.4)	3,566.0	(11,263.9)	(5,449.7)	(16,083.2)	(2,671.8)	(3,768.5)														
Green	(1,899.1)	(2,204.2)	(8,209.6)	(1,132.0)	11,102.3	(2,579.5)	(2,015.2)	(4,507.2)	(3,076.7)	(2,699.4)	(7,035.6)	(11,040.0)	(5,435.9)	(12,775.4)	2,051.1	(595.5)														
Green Lake	(951.3)	256.3	(233.1)	129.2	8,780.1	2,111.0	(2,320.2)	(4,055.3)	(11,003.8)	(3,372.3)	(7,661.2)	(6,344.6)	(613.6)	(2,571.5)	(1,727.7)	(2,321.2)														
Iowa	(1,150.8)	(634.5)	(4,995.6)	(1,504.0)	7,289.2	(871.9)	(1,210.5)	2,056.9	(5,938.9)	(4,079.6)	4,497.6	(8,262.3)	(4,012.3)	(3,311.6)	(7,247.6)	8,741.3														
Iron	(272.8)	(780.6)	(501.9)	199.1	(2,321.1)	(1,418.6)	(1,244.9)	7,985.1	(3,155.3)	(967.0)	(2,196.8)	(2,314.7)	(1,197.5)	(7,885.0)	406.2	(4.6)														
Jackson	(912.7)	2,936.1	1,797.8	(488.1)	3,697.2	(3,958.6)	(2,246.7)	(8,077.3)	(10,557.2)	(3,235.5)	3,017.5	(6,828.0)	(4,006.8)	16,753.5	(3,148.7)	(2,118.4)														
Jefferson	(1,338.9)	2,244.5	(6,114.8)	(1,030.6)	10,838.7	(1,025.8)	(10,520.9)	6,681.5	(11,359.3)	(359.9)	14,146.2	40,389.9	(8,001.2)	(18,149.4)	(6,692.1)	(3,186.3)														
Juneau	(1,078.9)	(152.5)	(5,928.5)	(195.7)	13,614.7	(3,636.9)	(2,409.5)	(8,866.4)	(2,601.9)	112.6	18,983.2	(7,699.7)	(1,567.5)	(18,748.8)	(573.4)	(958.1)														
Kenosha	666.3	(9,364.4)	(22,473.9)	31,884.7	(33,587.5)	1,482.1	2,902.6	(34,585.8)	19,047.8	10,467.8	(3,899.0)	128,265.5	16,532.6	9,102.4	(24,147.3)	(6,510.0)														
La Crosse	1,271.4	17,953.6	5,739.7	(3,650.6)	4,525.3	(1,056.5)	49,763.9	65,031.5	17,551.4	2,004.6	32,941.9	27,747.8	14,291.2	107,788.4	57,241.4	(2,818.0)														
Lafayette	(790.4)	343.4	(7,294.2)	(555.6)	3,503.2	(2,331.8)	(3,607.0)	(4,080.3)	(9,142.3)	(2,801.9)	(6,365.2)	(6,101.3)	(3,469.8)	(15,887.3)	(5,981.0)	(1,957.9)														
Langlade	(844.8)	(758.3)	2,102.9	(322.5)	16,023.7	(1,156.6)	474.5	21,972.7	(2,798.8)	(2,394.8)	2,130.9	(5,255.8)	(449.0)	32,000.3	(4,036.5)	494.2														



Surplus/Leakage 2016 in Thousand of Dollars

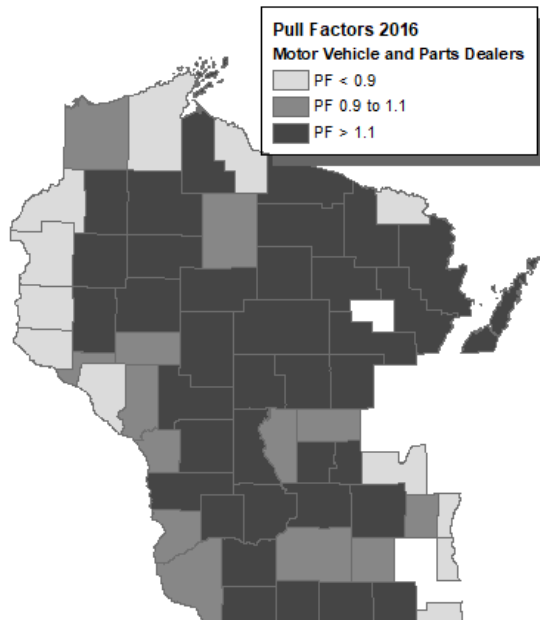
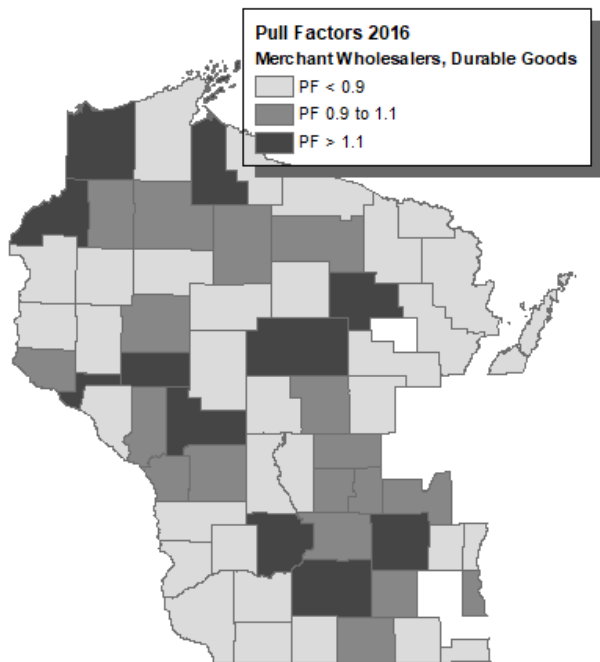
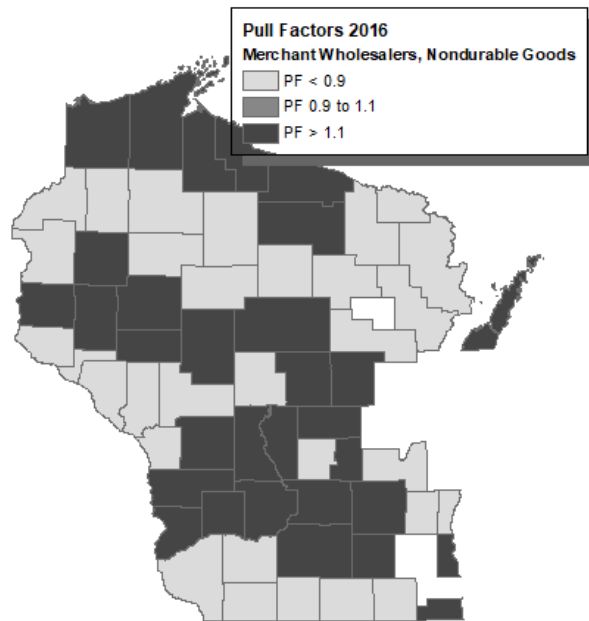
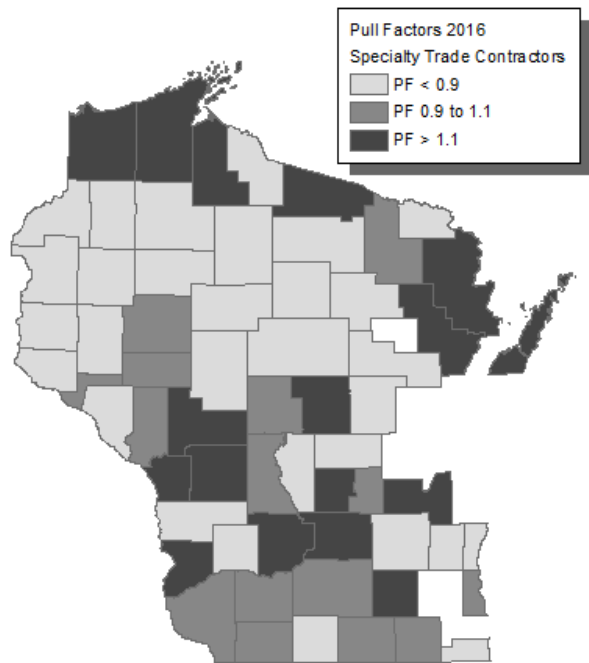
	Construction of Buildings	Specialty Trade Contractors	Merchant Wholesalers, Durable Goods	Merchant Wholesalers, Nondurable Goods	Motor Vehicle and Parts Dealers	Furniture and Home Furnishings Stores	Electronics and Appliance Stores	Material and Garden Equipment and Supplies Dealers	Food and Beverage Stores	Health and Personal Care Stores	Gasoline Stations	Clothing and Accessories Stores	Sporting Goods, Hobby, Book, and Music Stores	General Merchandise Stores	Miscellaneous Store Retailers	Nonstore Retailers
Lincoln	(1,230.1)	(1,290.4)	(3,815.9)	(1,733.5)	18,070.6	(806.9)	2,843.2	601.9	1,596.7	(1,032.1)	4,461.7	(8,928.5)	3,655.6	(5,806.4)	(5,984.7)	5,187.8
Marathon	(299.7)	(8,680.8)	32,125.5	(192.7)	41,650.7	1,803.6	6,014.1	72,009.5	(19,851.7)	(4,237.8)	8,870.6	7,464.4	15,258.0	79,757.2	6,584.6	(3,092.3)
Marquette	1,747.4	3,139.5	(6,630.7)	(754.4)	19,177.1	(4,814.5)	(954.4)	20,676.5	10,729.4	(1,968.6)	3,633.0	(9,858.0)	(1,062.6)	11,850.2	5,672.6	(1,401.1)
Marquette	(597.7)	5,465.9	(801.4)	(903.4)	7,261.3	(1,195.6)	916.8	(6,863.6)	(1,647.5)	(2,118.7)	(4,813.3)	(4,695.6)	(975.7)	(15,066.9)	301.9	(95.1)
Milwaukee	(10,915.4)	3,978.6	(24,215.0)	(12,420.1)	(365,765.4)	6,582.2	(26,747.1)	(365,867.9)	90,442.2	81,228.3	(119,270.4)	154,790.5	(45,760.1)	(174,854.3)	(90,627.2)	(69,511.3)
Monroe	1,564.6	2,837.6	995.6	958.2	13,060.5	(5,499.0)	(3,495.8)	(1,950.7)	(9,002.9)	(3,607.7)	20,598.1	(12,267.8)	(4,045.7)	37,374.9	(4,404.5)	(128.1)
Oconto	572.0	996.4	(13,342.1)	(1,235.7)	10,409.9	(4,800.9)	(3,571.5)	(9,812.8)	(8,606.3)	(5,969.7)	4,071.9	(12,992.7)	(3,455.6)	(40,913.9)	(12,181.6)	(1,523.2)
Oneida	915.5	(3,410.7)	749.8	670.8	49,153.1	7,126.5	4,376.1	66,463.7	15,487.8	855.2	(3,418.5)	(1,983.7)	5,707.3	55,771.4	2,679.2	5,543.8
Ozaukee	(1,903.3)	(21,113.9)	(56,640.1)	(8,130.5)	(72,486.5)	3,679.4	(4,797.7)	(59,957.3)	(20,946.5)	(4,135.2)	(24,637.9)	(26,655.2)	(7,517.6)	(58,814.2)	(39,564.0)	(14,684.6)
Pepin	(357.2)	(137.8)	862.4	(275.8)	(558.9)	(1,857.7)	173.3	3,260.9	(4,131.8)	(1,266.3)	(2,876.7)	(3,031.1)	(1,568.2)	(10,325.5)	2,162.5	(524.1)
Pierre	(1,930.0)	(4,374.2)	3,019.9	(811.4)	(23,602.6)	(6,276.4)	(5,428.3)	(20,042.9)	(4,099.7)	(5,836.7)	821.9	(12,296.4)	(5,265.0)	(49,528.6)	(7,904.3)	(2,446.4)
Polk	101.3	(7,963.2)	(9,343.9)	(1,409.0)	(8,798.6)	(3,329.7)	(4,501.0)	39,026.8	803.4	(5,417.3)	(2,519.0)	(15,090.6)	(2,848.4)	(2,242.5)	2,190.5	(2,047.3)
Portage	(846.5)	2,100.8	560.0	(437.9)	22,065.9	4,051.0	7,777.8	29,229.9	(4,864.4)	(2,252.9)	15,677.1	(7,687.6)	2,494.8	49,643.4	2,206.8	2,550.7
Price	(648.2)	(1,715.6)	(47.4)	(1,036.3)	1,719.4	(1,409.7)	(2,958.0)	(1,085.3)	(7,497.5)	(2,297.8)	2,301.7	(4,922.5)	(798.8)	(14,036.3)	(414.5)	(267.9)
Richland	(729.1)	(1,599.0)	(4,028.7)	(522.3)	10,741.6	(1,997.8)	(817.3)	(6,089.5)	(8,433.8)	(2,584.7)	5,004.5	(4,558.8)	(1,646.4)	19,484.0	(682.4)	(1,702.2)
Rock	(2,952.5)	(1,266.1)	300.8	(2,624.5)	53,796.9	(10,996.5)	2,277.4	27,793.6	33,458.6	452.9	24,021.5	(8,866.4)	8,948.1	46,356.3	9,318.2	(6,026.7)
Rusk	(559.8)	(1,057.5)	(3,521.8)	(801.3)	3,801.2	(2,911.2)	(2,554.7)	2,432.8	(6,475.1)	(1,984.4)	(4,508.2)	(4,105.8)	(2,457.5)	(16,181.3)	(127.6)	(871.4)
Sauk	(144.8)	4,942.5	10,585.1	4,197.7	23,043.2	1,938.4	(5,987.3)	97,800.6	(8,447.6)	8,636.6	7,709.7	47,087.9	10,813.4	37,546.9	4,631.9	8,556.5
Sawyer	(735.5)	(521.5)	(839.2)	(232.8)	20,300.9	2,606.0	(991.3)	11,118.3	176.9	(2,607.4)	3,412.3	(1,009.1)	250.3	33,726.0	1,299.2	(635.9)
Shawano	(1,690.8)	(2,193.6)	(14,225.0)	(1,386.7)	30,629.1	(4,583.7)	(2,693.6)	(3,884.3)	(3,102.4)	(1,861.2)	(377.4)	(10,422.7)	(1,758.9)	3,757.0	263.6	(3,749.9)
St. Croix	(1,899.6)	(9,529.9)	(20,384.6)	942.9	(27,948.9)	(11,016.0)	(9,936.5)	39,405.7	1,824.4	(7,154.4)	16,016.0	(27,318.4)	(9,795.6)	12,960.4	(9,292.6)	(2,419.4)
Taylor	(809.5)	(2,151.7)	(2,376.5)	(617.5)	9,458.0	(2,347.0)	3,177.7	3,851.9	(9,363.8)	(2,869.7)	1,829.8	(5,588.1)	(1,253.8)	9,189.7	(6,041.7)	(724.5)
Trempealeau	(1,375.8)	(289.2)	(2,023.2)	(1,410.5)	(1,696.0)	13,702.4	(887.3)	329.7	(9,031.1)	(4,253.1)	9,339.3	(10,039.8)	(3,548.3)	(31,796.4)	4,087.8	17.3
Vernon	(1,245.1)	(1,157.8)	(4,749.5)	1,802.2	6,958.5	(3,139.6)	(1,005.6)	(12,944.5)	(7,351.2)	(4,414.0)	2,948.4	(8,796.5)	(3,545.8)	(3,085.8)	(544.5)	6,625.9
Vilas	(1,159.2)	2,646.4	(4,568.6)	2,109.4	17,059.6	6,414.8	2,729.4	2,692.3	10,681.6	(244.0)	4,394.4	(5,891.1)	3,825.1	(28,503.2)	2,165.0	(891.8)
Walworth	(1,634.0)	(1,178.2)	(20,894.6)	(1,608.7)	41,091.0	1,937.8	6,067.5	24,610.2	(15,721.7)	(874.7)	11,116.2	(11,666.3)	(4,262.6)	18,341.3	(6,704.1)	(3,965.5)
Washburn	(749.0)	(1,354.0)	399.0	(688.5)	14,713.4	(1,636.2)	(1,282.2)	4,067.1	(8,663.9)	(2,655.3)	1,269.7	(4,001.7)	2,537.6	(17,659.1)	7,161.8	578.2
Washington	1,842.9	(20,499.3)	(18,838.9)	(2,343.3)	(2,120.9)	2,083.0	(10,988.8)	25,434.7	(14,798.7)	(481.1)	(3,673.7)	(29,365.4)	(11,009.8)	19,469.3	(3,257.2)	42,689.0
Waupaca	1,210.5	(2,587.1)	(20,036.4)	(416.7)	19,805.6	(5,902.8)	(3,926.6)	(31,045.9)	1,723.6	704.5	10,952.2	(15,396.9)	(5,692.5)	(1,809.8)	2,869.5	(2,990.4)
Wausara	(40.0)	(1,203.8)	(1,091.5)	(48.6)	3,528.8	(1,039.0)	(3,295.0)	(10,860.0)	(2,132.7)	(3,624.0)	3,074.6	(7,579.0)	(1,217.8)	(26,188.0)	1,234.4	(2,107.8)
Wood	(2,109.4)	(243.1)	(11,230.6)	(3,778.2)	22,722.7	(167.1)	(6,251.8)	(12,263.5)	681.7	(3,630.4)	4,002.6	(18,073.9)	(2,147.6)	25,779.4	18,251.2	6,234.4

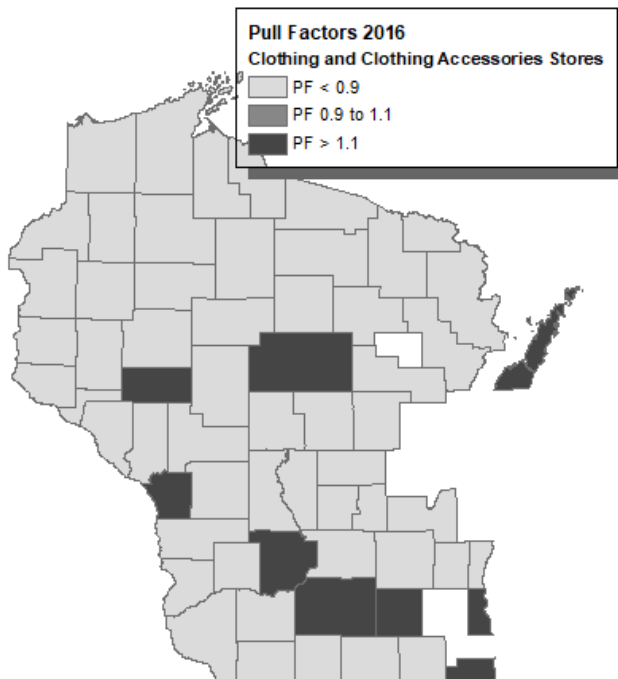
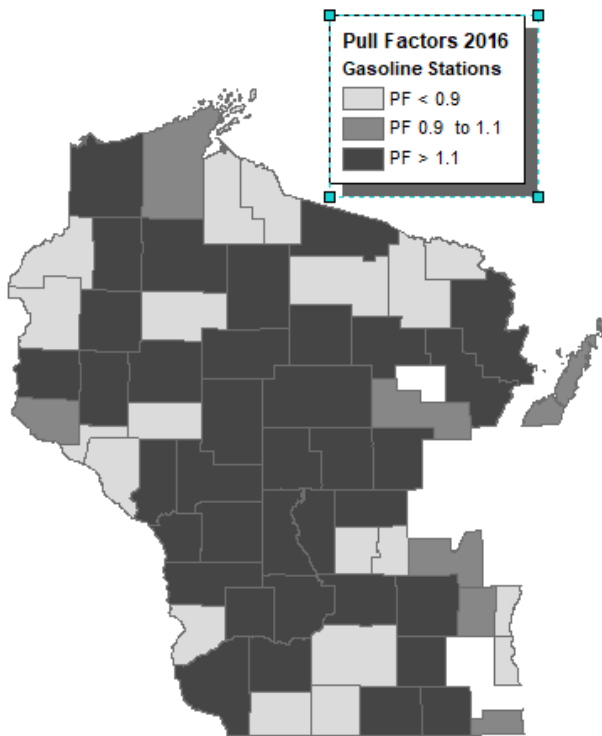
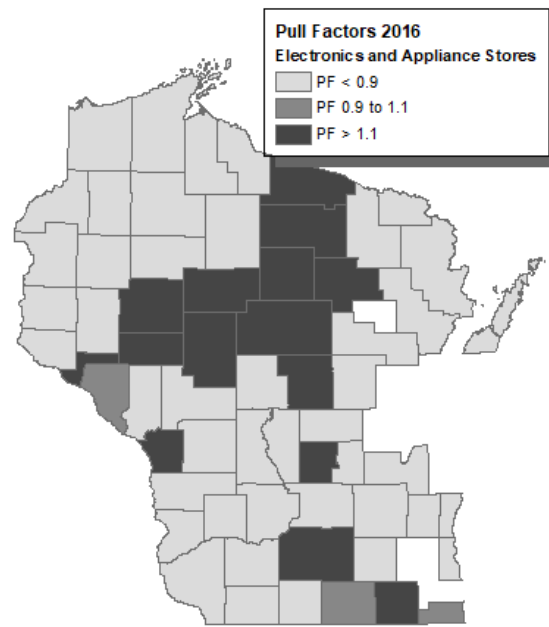
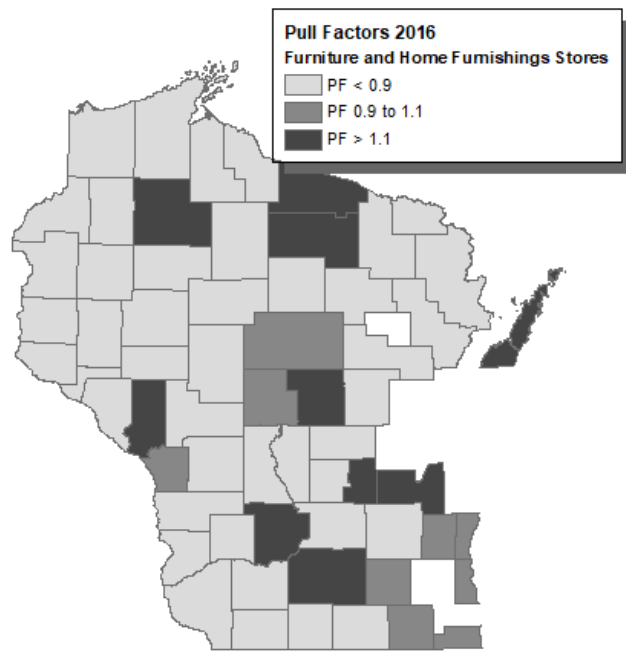
Surplus/Leakage 2016 in Thousand of Dollars

	Publishing Industries (except Internet)	Telecommunications	Credit Intermediation and Related Activities	Rental and Leasing Services	Professional, Scientific, and Technical Services	Administrative and Support Services	Amusement, Gambling, and Recreation Industries	Accommodation and Food Services	Food Services and Drinking Places	Repair and Maintenance	Personal and Laundry Services	Total Taxable Sales
Adams	(837.2)	7,579.5	(560.1)	(2,499.0)	(2,457.5)	(375.2)	(1,993.5)	36,347.3	(8,443.4)	839.8	(1,896.7)	(11,391.8)
Ashland	(673.0)	3,876.8	(399.8)	(1,201.1)	(1,810.9)	254.6	(1,602.3)	1,968.8	2,797.5	(212.8)	2,380.6	32,438.4
Barron	(789.5)	9,397.8	43.9	(4,250.6)	(7,120.2)	972.6	1,599.4	(4,723.8)	(11,518.3)	(154.9)	1,936.1	101,604.5
Bayfield	(739.8)	4,572.1	(1,105.5)	(1,913.5)	(1,166.1)	504.0	3,283.0	6,480.7	(2,426.1)	(72.5)	(2,541.6)	(32,064.2)
Buffalo	(654.7)	(564.3)	(978.4)	(3,236.6)	(869.5)	(1,042.9)	(1,558.9)	(4,789.0)	(6,984.5)	(1,898.3)	(2,473.3)	(77,974.5)
Burnett	(680.7)	4,509.4	(1,017.3)	(2,659.2)	(3,051.0)	148.7	(1,620.9)	(228.6)	1,711.6	1,791.5	(2,565.6)	(36,563.0)
Chippewa	(509.6)	(4,237.7)	(177.1)	(5,066.9)	(6,480.5)	(1,391.6)	(138.5)	(11,346.9)	(24,727.8)	7,605.9	(4,100.5)	(6,017.9)
Clark	(380.5)	(4,308.0)	(1,324.8)	(5,206.8)	(6,832.4)	(2,819.1)	(3,535.5)	(10,861.0)	(20,596.2)	634.4	(5,536.0)	(123,500.6)
Columbia	(597.9)	3,991.2	(2,470.8)	(9,862.9)	(7,206.6)	(3,579.5)	4,461.9	(439.8)	(23,513.7)	(1,062.1)	(2,221.9)	(98,961.1)
Crawford	(718.6)	2,535.6	(1,073.9)	(2,100.7)	(1,708.5)	(1,298.6)	(1,711.1)	2,904.2	950.2	512.2	936.7	38,242.6
Dane	31,444.2	52,393.4	(3,188.0)	22,964.9	117,688.2	42,865.1	(26,662.8)	7,451.2	65,289.6	(32,542.6)	5,340.2	598,093.0
Dodge	(184.4)	(1,873.7)	(945.9)	2,789.0	(4,568.2)	(4,225.3)	(3,989.3)	(25,428.1)	(51,610.4)	(2,193.1)	(11,420.1)	(143,467.1)
Door	(851.7)	1,513.9	(233.5)	(1,167.5)	1,120.0	2,990.0	5,742.9	69,555.7	33,742.3	(2,726.8)	4,901.8	190,325.3
Douglas	(847.8)	13,409.4	269.7	(355.4)	560.8	(1,937.7)	(1,328.8)	(4,325.4)	14,389.4	6,734.8	3,422.5	63,663.7
Dunn	(650.0)	3,194.2	(344.2)	(7,147.1)	(6,202.0)	(273.3)	(218.3)	(9,045.3)	(11,631.2)	784.4	(4,688.9)	(29,933.1)
Eau Claire	656.5	5,329.2	6,162.7	(9,464.5)	16,234.9	582.6	6,794.1	(10,072.6)	28,998.1	11,634.7	(9,108.4)	372,142.4
Florence	(246.4)	(751.4)	(368.3)	(620.5)	(1,808.2)	(629.8)	(586.8)	(1,802.6)	(910.5)	(1,680.7)	(1,656.7)	(41,576.1)
Fond du Lac	(1,512.1)	(10,487.8)	1,906.7	63,750.6	(10,873.1)	(5,186.9)	8,643.1	(19,527.7)	(23,109.8)	5,753.1	(11,582.3)	(30,598.5)
Forest	(368.9)	(356.7)	(551.2)	(1,585.2)	(1,613.4)	(434.4)	(878.3)	(541.2)	(2,862.5)	(770.9)	(1,365.9)	(27,346.4)
Grant	(830.9)	3,308.3	(1,372.0)	(9,570.8)	(9,541.3)	(3,358.1)	(2,498.9)	(13,488.9)	(20,983.6)	7,311.0	(5,543.8)	(92,629.8)
Green	(546.6)	(3,521.4)	(1,371.3)	(4,482.0)	(4,849.2)	(1,744.8)	(2,558.6)	(9,713.5)	(22,044.1)	(649.6)	(2,099.6)	(105,632.5)
Green Lake	(1,019.0)	(2,206.4)	(199.6)	(169.6)	(2,327.4)	(1,183.7)	(1,028.5)	1,925.4	(13,506.9)	(2,312.5)	(2,047.1)	(55,974.4)
Iowa	105.6	880.2	(819.7)	(4,878.5)	(313.6)	(1,165.8)	(2,935.1)	(2,835.8)	(10,138.2)	2,377.6	(4,743.3)	(45,101.3)
Iron	(292.2)	1,580.2	(436.6)	1,942.2	(714.7)	(746.7)	(695.7)	2,345.7	3,883.3	163.6	(916.8)	(9,558.1)
Jackson	(977.6)	2,358.2	(514.0)	(1,963.6)	(3,748.3)	831.6	(2,327.8)	(734.3)	(6,293.1)	(1,292.6)	(2,599.4)	(34,636.7)
Jefferson	(1,092.5)	(1,227.1)	(944.6)	(3,579.5)	(5,680.6)	(3,201.7)	(1,501.6)	(21,778.5)	(12,085.3)	5,155.2	(6,875.4)	(46,290.0)
Juneau	(652.1)	4,714.3	(748.1)	(4,096.3)	(4,707.9)	(1,769.9)	(874.2)	1,364.0	(2,654.5)	2,902.5	(972.7)	(29,202.3)
Kenosha	(1,915.3)	(14,335.9)	397.4	2,343.4	(7,072.6)	(2,172.1)	5,817.6	(45,651.4)	28,540.1	745.9	39,103.4	91,584.4
La Crosse	677.6	7,298.5	(270.4)	(771.9)	3,783.7	(923.5)	1,680.4	(1,671.1)	47,466.3	9,870.7	(2,311.1)	461,156.3
Lafayette	(846.6)	(1,408.4)	(1,265.1)	(3,226.3)	(4,436.4)	(1,667.7)	(2,015.8)	(6,192.6)	(13,882.2)	(2,565.9)	(1,324.4)	(105,350.8)
Langlade	(904.9)	(2,432.3)	(1,352.2)	(3,127.5)	(1,814.2)	(855.8)	494.2	(6,619.0)	(765.0)	3,319.3	(2,560.5)	39,964.1

Surplus/Leakage 2016 in Thousand of Dollars

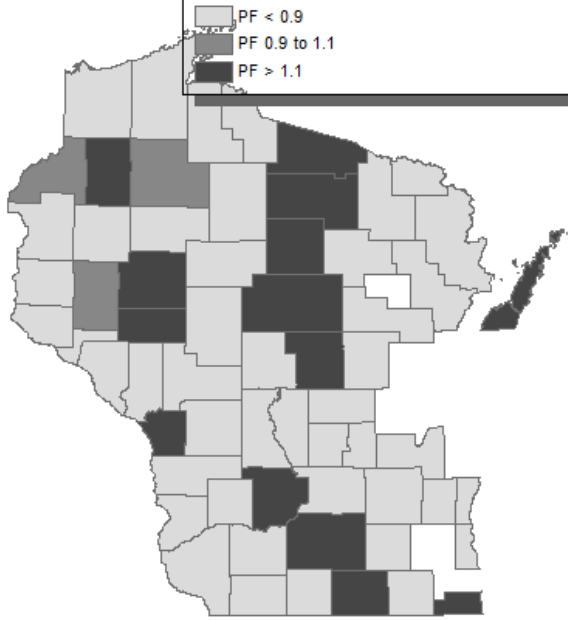
	Publishing Industries (except Internet)	Telecommunications	Credit Intermediation and Related Activities	Rental and Leasing Services	Professional, Scientific, and Technical Services	Administrative and Support Services	Amusement, Gambling, and Recreation Industries	Accommodation and Food Services	Food Services and Drinking Places	Repair and Maintenance	Personal and Laundry Services
Lincoln	(320.5)	(5,423.8)	(596.7)	(1,388.8)	(3,033.1)	(1,169.6)	875.1	(6,760.2)	(7,370.8)	1,479.9	(4,422.1)
Marathon	(279.9)	(16,924.5)	1,039.0	945.4	(224.7)	(1,484.9)	3,136.3	(14,799.3)	(18,399.9)	11,051.5	(9,101.1)
Marquette	(810.5)	840.2	(76.0)	(1,155.0)	(2,414.8)	(2,172.3)	(2,172.4)	(3,511.3)	(5,507.3)	960.7	14,195.4
Marquette	(640.2)	4,192.6	(956.7)	(922.0)	(3,146.5)	(854.4)	(1,524.3)	(188.1)	(6,871.3)	1,025.1	(1,106.8)
Milwaukee	9,569.8	(34,890.6)	24,887.7	76,050.9	108,020.1	6,552.4	(38,432.1)	(41,923.2)	214,259.0	(50,472.8)	76,916.0
Monroe	(1,066.5)	10,719.8	(179.7)	(3,875.4)	(9,105.8)	(2,860.6)	(2,334.2)	(902.5)	(2,316.3)	(20.8)	(2,543.2)
Oconto	(1,121.2)	865.9	(1,043.2)	(3,151.0)	(9,614.5)	(1,824.4)	464.0	(10,644.8)	(19,435.9)	(6,659.5)	(6,070.5)
Oneida	(862.8)	(5,493.9)	(45.3)	4,489.7	(4,813.1)	2,677.9	7,737.2	9,542.6	7,994.9	3,044.6	(4,309.8)
Ozaukee	(1,364.7)	(51,207.8)	796.1	(17,752.5)	(13,160.3)	1,586.0	(7,020.8)	(41,085.2)	(82,556.1)	(18,826.8)	22,480.1
Pepin	(382.6)	(1,067.9)	(571.8)	(1,897.0)	(217.0)	(977.8)	(911.0)	(2,798.7)	(2,172.4)	571.8	(1,020.8)
Pierce	(997.7)	(2,152.1)	(980.9)	(1,160.2)	(9,597.8)	(3,287.0)	(3,447.3)	(15,121.8)	(24,626.3)	(6,728.8)	(5,178.8)
Polk	(1,010.3)	541.0	(761.6)	(3,067.4)	(4,465.9)	(457.0)	(1,812.5)	(11,361.6)	(16,625.8)	2,327.4	(7,817.6)
Portage	464.6	3,547.7	1,253.3	6,561.1	3,784.8	(574.9)	(3,254.7)	(6,434.1)	4,449.1	361.1	(4,508.3)
Price	(694.3)	1,051.8	(292.5)	(2,424.3)	(3,171.2)	(80.8)	(1,653.2)	(1,263.7)	(8,377.9)	1,319.5	188.1
Richland	(781.0)	336.9	(1,167.1)	(3,607.6)	220.5	79.4	(1,859.6)	(3,809.1)	(11,429.3)	193.4	(2,874.3)
Rock	(1,863.1)	17,901.0	(469.2)	(6,295.6)	(13,088.1)	(1,882.9)	48,848.2	(19,498.1)	21,111.3	(799.1)	(8,861.3)
Rusk	(599.6)	380.1	(896.0)	(2,510.2)	(2,905.4)	859.6	(1,427.7)	387.1	(7,746.0)	584.6	(2,307.1)
Sauk	1,005.6	4,111.9	559.5	(1,353.7)	2,422.3	298.9	25,979.0	248,802.4	122,478.7	(609.1)	6,282.0
Sawyer	237.8	3,007.3	(97.2)	(2,297.9)	(1,136.8)	3,392.7	(1,875.9)	15,898.8	8,437.9	2,638.9	(1,355.1)
Shawano	(967.8)	2,404.4	(1,261.1)	(3,250.9)	(8,346.4)	341.0	(1,166.4)	(6,886.7)	(6,866.4)	1,779.1	(5,497.4)
St. Croix	(3,092.3)	6,020.6	1,774.7	1,614.6	(8,691.6)	2,586.5	4,218.5	(23,862.2)	(17,419.1)	(3,692.1)	(11,318.5)
Taylor	(867.1)	(5,639.2)	(595.7)	(3,065.4)	(2,590.4)	(1,031.7)	(184.4)	(6,342.6)	(11,027.2)	1,693.7	(3,451.6)
Trempealeau	(441.2)	7,209.6	(502.8)	(6,153.8)	(4,782.9)	(1,946.9)	(3,509.0)	(8,094.0)	(14,008.5)	1,311.4	(3,911.1)
Vernon	(714.0)	5,364.2	(1,993.1)	(4,611.3)	(5,267.9)	(1,409.4)	(3,175.7)	(6,509.8)	(17,646.0)	(1,550.8)	(3,726.5)
Vilas	(1,241.7)	(3,201.7)	(171.0)	(1,153.8)	(2,992.3)	1,221.3	5,286.6	19,981.2	9,616.9	4,048.5	(279.9)
Walworth	(1,832.5)	(13,510.4)	(173.6)	4,860.0	(4,516.1)	3,221.4	402.0	86,313.0	53,411.9	(1,362.3)	16,321.8
Washington	(802.3)	1,917.4	(1,198.9)	(3,437.1)	(3,424.9)	2,044.3	(1,910.3)	(879.4)	(3,125.2)	(527.0)	(1,665.4)
Washington	(2,887.0)	(20,029.9)	2,647.3	(8,491.4)	(2,521.7)	(1,058.1)	1,818.6	(46,263.0)	(49,843.2)	16,622.8	8,497.5
Waupaca	(1,132.2)	(5,256.6)	(633.5)	(4,689.2)	(10,075.8)	(3,116.7)	3,700.4	(7,975.6)	(16,677.8)	(3,397.0)	(4,930.3)
Wausara	(1,095.0)	2,054.7	(1,636.4)	(2,030.5)	(4,903.4)	(2,002.2)	2,410.3	(362.3)	(10,645.8)	2,924.0	(2,923.7)
Wood	4,027.0	7,599.9	(1,405.7)	(4,366.1)	(6,652.5)	(3,834.2)	(3,460.1)	(12,173.6)	(18,146.3)	22,706.7	(10,569.2)





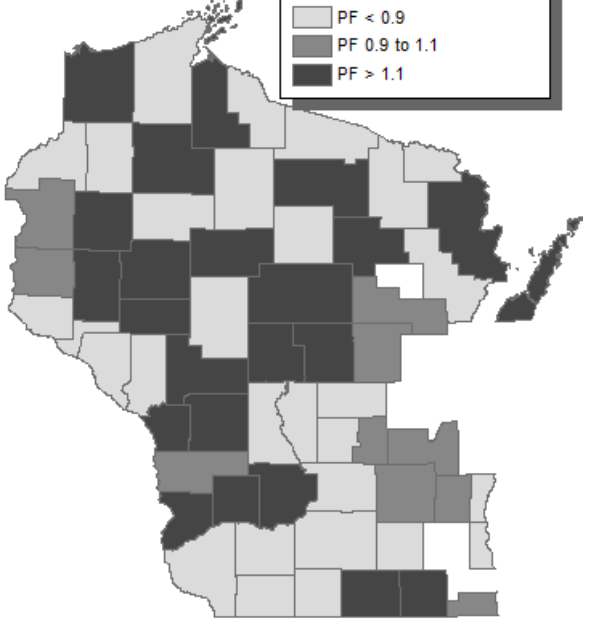
**Pull Factors 2016**  
**Sporting Goods, Hobby, Book, and Music Stores**

- PF < 0.9
- PF 0.9 to 1.1
- PF > 1.1



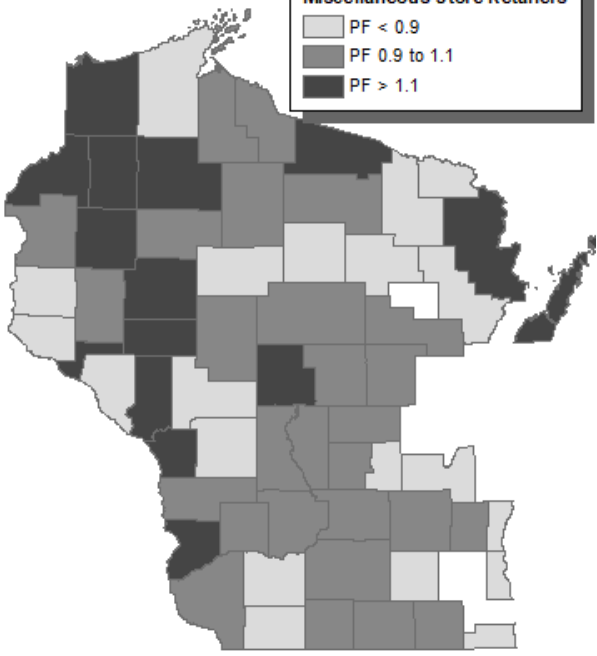
**Pull Factors 2016**  
**General Merchandise Stores**

- PF < 0.9
- PF 0.9 to 1.1
- PF > 1.1



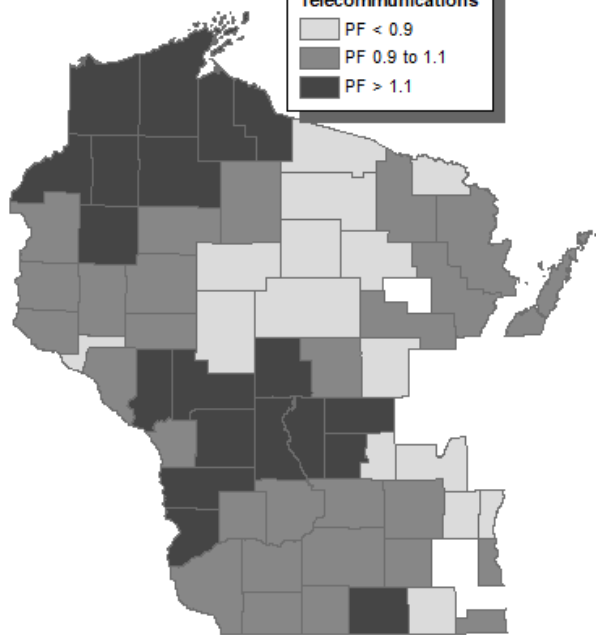
**Pull Factors 2016**  
**Miscellaneous Store Retailers**

- PF < 0.9
- PF 0.9 to 1.1
- PF > 1.1



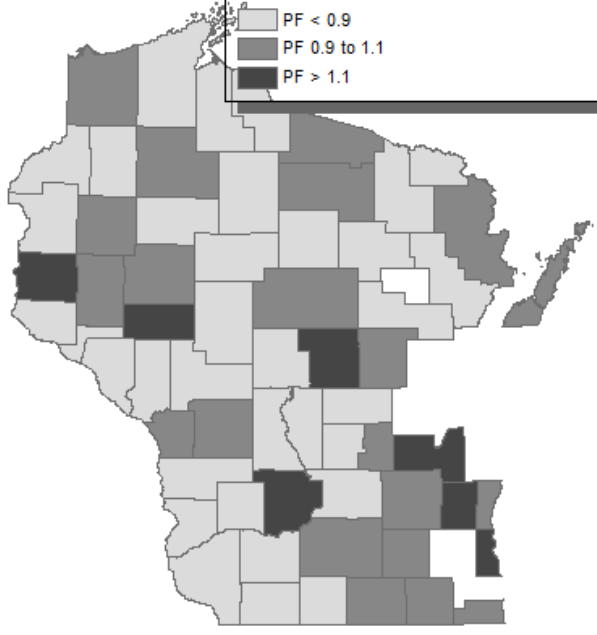
**Pull Factors 2016**  
**Telecommunications**

- PF < 0.9
- PF 0.9 to 1.1
- PF > 1.1



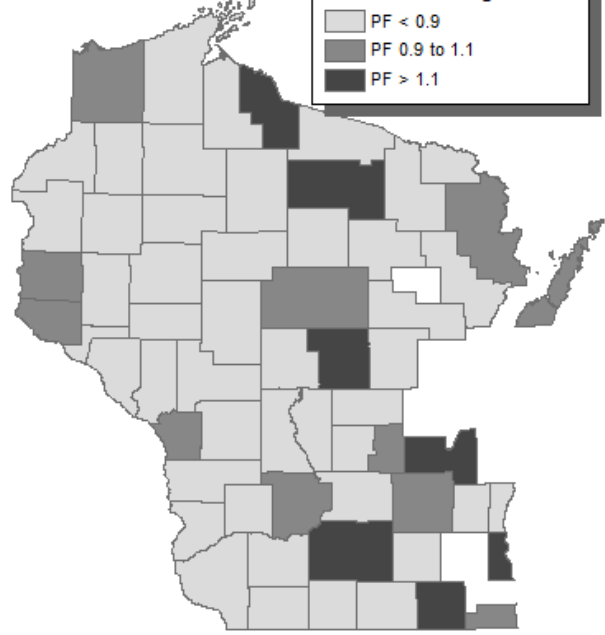
**Pull Factors 2016**  
**Credit Intermediation and Related Activities**

- PF < 0.9
- PF 0.9 to 1.1
- PF > 1.1



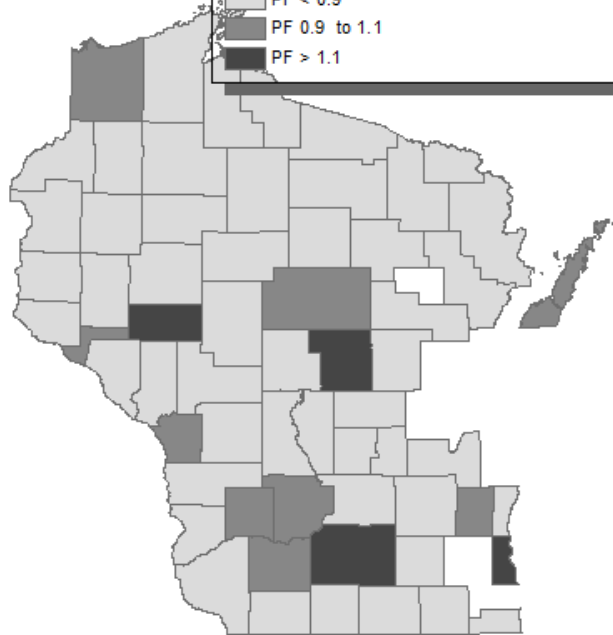
**Pull Factors 2016**  
**Rental and Leasing Services**

- PF < 0.9
- PF 0.9 to 1.1
- PF > 1.1



**Pull Factors 2016**  
**Professional, Scientific, and Technical Services**

- PF < 0.9
- PF 0.9 to 1.1
- PF > 1.1



**Pull Factors 2016**  
**Accommodation**

- PF < 0.9
- PF 0.9 to 1.1
- PF > 1.1

