A Trade Area Analysis of Wisconsin Retail and Service Markets: Updated for 2017

August 2018

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Support for the work was provide in part by
the Economic Development Administration
University Center at the Center for
Community and Economic Development,
University of Wisconsin-Madison/Extension.

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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 2017. 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.

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Introduction[1]

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.

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.

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 may service a local community within the county while other businesses draw customers from a much larger geographic area.

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.

[1] 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/

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):

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

where PS 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:

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

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:

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

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):

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

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 64 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 64 counties that are contained in this analysis.

Fifty-two of the 64 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 (0.778, which means that per capita income is only 77.8% of the state average) while Ozaukee has the highest Index of Income (1.632). 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 venders 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: Base Data for Wisconsin Counties (2017)

	Population	Per Capita Income	Index of Income		Population	Per Capita Income	Index of Income
Adams	20,069	35,963	0.794	Lincoln	27,902	41,410	0.914
Ashland	15,714	36,817	0.813	Marathon	135,603	45,076	0.995
Barron	45,412	44,458	0.981	Marinette	40,491	40,338	0.890
Bayfield	14,891	42,370	0.935	Marquette	15,067	37,159	0.820
Buffalo	13,099	42,666	0.942	Milwaukee	951,448	43,375	0.957
Burnett	15,213	38,987	0.861	Monroe	45,623	38,566	0.851
Chippewa	63,649	41,434	0.915	Oconto	37,430	41,614	0.919
Clark	34,557	36,683	0.810	Oneida	35,601	46,675	1.030
Columbia	56,927	46,574	1.028	Ozaukee	88,314	73,944	1.632
Crawford	16,321	38,041	0.840	Pepin	7,307	44,954	0.992
Dane	531,273	55,232	1.219	Pierce	41,238	43,314	0.956
Dodge	88,068	40,224	0.888	Polk	43,481	42,276	0.933
Door	27,587	55,336	1.221	Portage	70,447	42,386	0.936
Douglas	43,509	38,861	0.858	Price	13,517	44,123	0.974
Dunn	44,704	36,411	0.804	Richland	17,476	38,905	0.859
Eau Claire	102,965	43,543	0.961	Rock	161,620	40,477	0.893
Florence	4,456	48,949	1.080	Rusk	14,127	35,944	0.793
Fond du Lac	102,144	44,665	0.986	Sauk	63,949	44,037	0.972
Forest	9,064	35,263	0.778	Sawyer	16,369	41,614	0.919
Grant	52,214	39,588	0.874	Shawano	41,062	38,050	0.840
Green	37,075	46,729	1.031	Sheboygan	115,427	47,930	1.058
Green Lake	18,719	44,759	0.988	St. Croix	88,029	49,494	1.092
Iowa	23,654	44,484	0.982	Taylor	20,439	36,503	0.806
Iron	5,726	44,542	0.983	Trempealeau	29,633	42,332	0.934
Jackson	20,562	39,690	0.876	Vernon	30,814	37,031	0.817
Jefferson	84,625	41,698	0.920	Vilas	21,435	50,437	1.113
Juneau	26,274	37,345	0.824	Walworth	102,959	43,989	0.971
Kenosha	168,183	42,368	0.935	Washburn	15,648	43,323	0.956
Kewaunee	20,405	42,867	0.946	Washington	134,296	52,051	1.149
La Crosse	118,122	45,731	1.009	Waupaca	51,533	43,448	0.959
Lafayette	16,753	42,877	0.946	Waushara	24,162	39,829	0.879
Langlade	19,221	40,940	0.904	Wood	73,107	43,193	0.953

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 $2,017.74 in 2017. This result is largely attributed to the expensiveness of automobiles. The second largest single category of retail expenditures is general merchandise stores with $1,445.88. There are two potential reasons why this 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.

Table 2: Per Capita Taxable Sales for Wisconsin (2017)

	Per Capita Taxable Sales
Retail Trade	
Motor Vehicle and Parts Dealers	2,017.74
Furniture and Home Furnishings Stores	257.10
Electronics and Appliance Stores	230.09
Building Material and Garden Equipment and Supplies	1,045.09
Food and Beverage Stores	536.13
Health and Personal Care Stores	170.79
Gasoline Stations	399.09
Clothing and Clothing Accessories Stores	401.91
Sporting Goods, Hobby, Book, and Music Stores	208.59
General Merchandise Stores	1,445.88
Miscellaneous Store Retailers	867.85
Nonstore Retailers	423.37
Services	
Specialty Trade Contractors	281.56
Telecommunications	899.63
Rental and Leasing Services	369.85
Professional, Scientific, and Technical Services	420.70
Administrative and Support Services	150.54
Amusement, Gambling, and Recreation Industries	131.44
Accommodation	392.37
Food Services and Drinking Places	1,503.44
Repair and Maintenance	393.08
Personal and Laundry Services	382.00
Total Taxable Sales	12,928.21

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 $1,503.44 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) ($420.70 vs $392.37). In 2009, for example, per capital spending on professional, scientific and technical services was $238.40 which represents a 76.5% 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 three reasons why there may be no data for a particular category for any given county. First, there are eight 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. Finally, disclosure rules prohibit the release of data that may identify the revenues (sales) of any individual business. In more rural counties, for example, there may be one grocery store that dominates the market which means that the data will be suppressed. Here local knowledge of the retail and service markets are vital to properly interpreting the results of the Trade Area Analysis.

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.

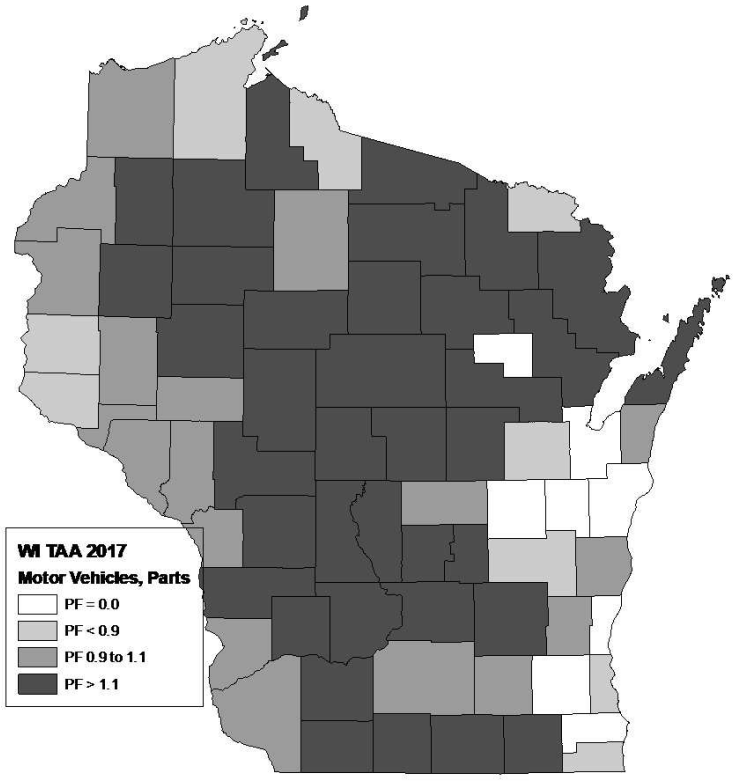
In more rural counties, for example, there may be one grocery store that dominates the market which means that the data will be suppressed. Here local knowledge of the retail and service markets are vital to properly interpreting the results of the Trade Area Analysis.

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.

Map 1: Pull Factors Total Taxable Sales 2017



Consider the Pull Factor and corresponding Surplus/Leakage calculation for total taxable sales (Table 3). In the strictest interpretation 40 of the 64 counties in this analysis, or 62.5%, have a Pull Factor less than one, suggesting that these 40 counties are experiencing Leakages of taxable retail and service activities. The three counties with the smallest Pull Factors are Florence (PF=0.44), Kewaunee (PF=0.48) and Buffalo (PF=0.56), which translates to leakages of $34.99 million, $130.61 million, and $70.28 million, respectively, while the counties with the largest Pull Factors are Sauk (PF=1.82), Oneida (PF=1.52), and Door (PF=1.44), which translates into surpluses of $662.60 million, $247.57 million, and $192.14 million, respectively. The large surpluses for these last three counties is partially explained by large tourism and recreational economies. Counties with the lowest Pull Factors tend to be smaller more rural counties that are within a reasonable driving distance to a larger county.

Table 3: Summary of Total Taxable Sales (2017)

	Pull Factor	Surplus or Leakage (MM$)		Pull Factor	Surplus or Leakage (MM$)
Adams	1.07	13.62	Lincoln	0.94	(19.52)
Ashland	1.14	23.00	Marathon	1.08	145.78
Barron	1.22	127.46	Marinette	1.14	64.58
Bayfield	0.87	(23.00)	Marquette	0.81	(30.93)
Buffalo	0.56	(70.28)	Milwaukee	0.95	(570.69)
Burnett	0.77	(39.48)	Monroe	1.03	15.21
Chippewa	1.05	39.15	Oconto	0.69	(137.37)
Clark	0.71	(103.25)	Oneida	1.52	247.57
Columbia	0.92	(59.62)	Ozaukee	0.69	(570.43)
Crawford	1.28	50.00	Pepin	0.68	(29.79)
Dane	1.02	193.36	Pierce	0.58	(215.36)
Dodge	0.88	(123.62)	Polk	0.93	(35.42)
Door	1.44	192.14	Portage	1.18	150.81
Douglas	1.09	44.54	Price	0.74	(44.90)
Dunn	0.98	(10.96)	Richland	0.88	(23.25)
Eau Claire	1.29	370.74	Rock	1.12	227.95
Florence	0.44	(34.99)	Rusk	0.82	(26.25)
Fond du Lac	0.95	(67.96)	Sauk	1.82	662.62
Forest	1.01	0.51	Sawyer	1.43	83.63
Grant	0.87	(76.70)	Shawano	0.97	(14.68)
Green	0.83	(82.14)	Sheboygan	0.86	(221.18)
Green Lake	0.84	(38.85)	St. Croix	0.94	(69.28)
Iowa	0.88	(35.79)	Taylor	0.83	(36.44)
Iron	0.76	(17.36)	Trempealeau	0.77	(82.86)
Jackson	0.89	(25.75)	Vernon	0.80	(64.74)
Jefferson	0.96	(42.90)	Vilas	1.22	66.79
Juneau	0.99	(3.93)	Walworth	1.14	181.20
Kenosha	1.05	100.55	Washburn	0.92	(15.79)
Kewaunee	0.48	(130.61)	Washington	0.95	(104.62)
La Crosse	1.31	476.68	Waupaca	0.89	(73.36)
Lafayette	0.58	(85.52)	Waushara	0.77	(62.48)
Langlade	1.19	42.49	Wood	1.00	1.67

The leakage here can be interpreted as the dollar value of the Pull Factor being less than one, whereas a surplus is the dollar value of the Pull Factor being greater than one. If the Pull Factor is less that one and there are dollars being lost (leakage) out of the county, this may point to market opportunities. Is the leakage sufficiently large to support a new business, or perhaps existing businesses can expand to capture some of those leakages?

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.[2] This 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.[2] 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

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 closed 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 0.95, very close to one, but a leakage of about $68 million.

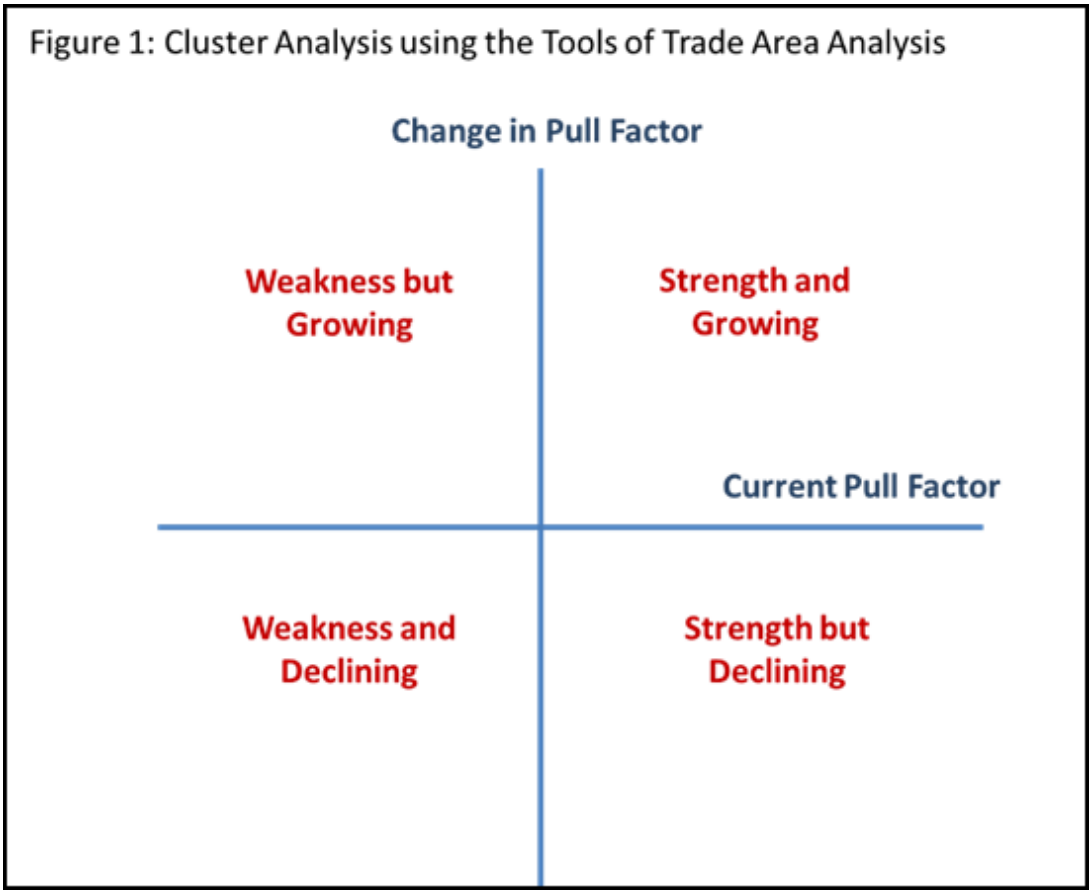
[1] This includes an analysis of:

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
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
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.TAAcounty.%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. [3] 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.

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).

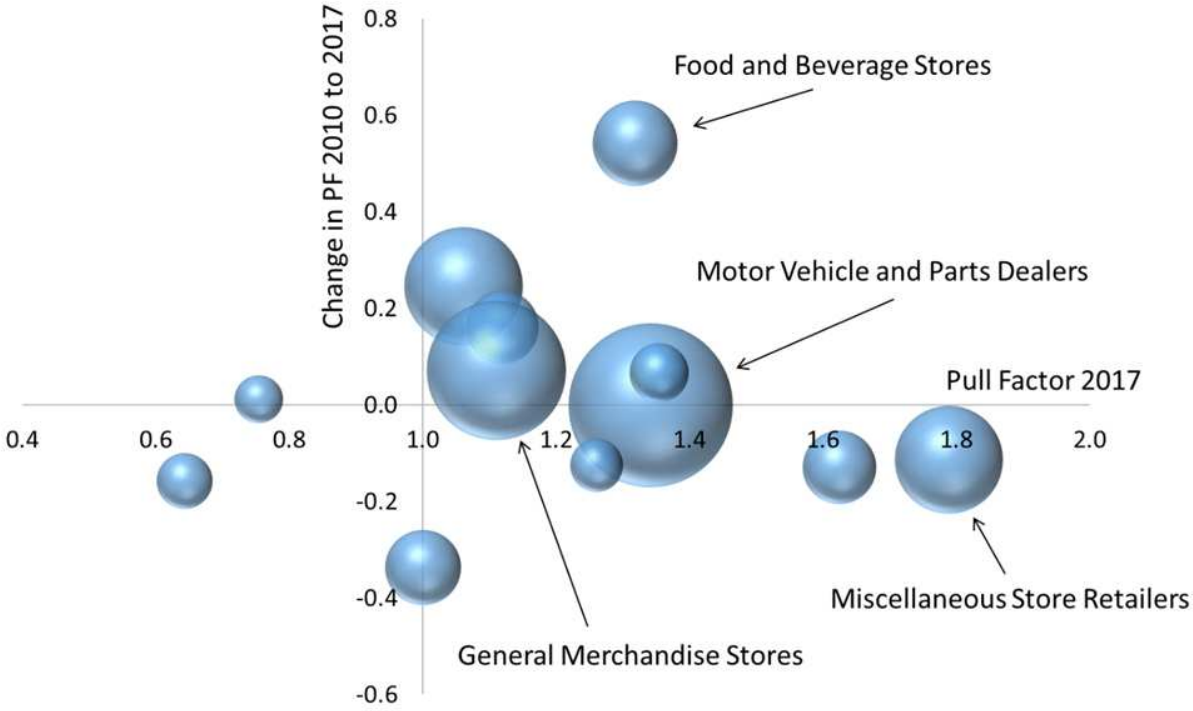
Figure 1: Cluster Analysis using the Tools of Trade Area Analysis



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

Consider, for example, the retail markets of Door County (Figure 2 and Table 4). The change in the Pull Factor is from 2010 to 2017 and the relative size of the market is based on potential sales (eq.(1)); the larger the "bubble" the greater the potential sales.

Figure 2: Retail Sector Cluster -- Door County 2010 to 2017



Notice that Furniture and Home Furnishing Stores is a strength that has been growing over time, but the potential sales is modest compared to the overall market while Food and Beverage Stores are also growing and a larger market potential. Also note that the one sector that has the largest potential sales (almost $68 million), Motor Vehicles and Parts Dealer, is a strength (Pull Factor 1.34) but is declining, but slightly. Indeed, the change in the Pull Factor from 2010 to 2017 is very modest (0.002) suggesting that the county Motor Vehicles and Parts Dealer is largely unchanged.

A similar cluster analysis for the services sectors clearly identifies tourism and recreational industries as strengths to the county economy. The Pull Factor for Accommodations is almost seven pointing to a high concentration of activity compared to other Wisconsin counties. The strength of the tourism and recreation industry is further identified by the strong Pull Factor for Food Services and Drinking Places (restaurants and taverns/bars).

Table 4: Retail Clusters for Door County

	Pull Factor 2017	Change Pull Factor 2010-2017	Potential Sales 2017 (000$)
Strength and Growing			
Furniture and Home Furnishings Stores	1.36	0.066	8,663
Food and Beverage Stores	1.32	0.542	18,065
Gasoline Stations	1.12	0.161	13,448
General Merchandise Stores	1.11	0.072	48,720
Building Material and Garden Equipment and Supplies Dealers	1.06	0.245	35,215
Strength but Declining			
Miscellaneous Store Retailers	1.79	-0.113	29,243
Clothing and Clothing Accessories Stores	1.62	-0.130	13,542
Motor Vehicle and Parts Dealers	1.34	-0.002	67,989
Sporting Goods, Hobby, Book, and Music Stores	1.26	-0.125	7,028
Nonstore Retailers	1.00	-0.337	14,266
Weakness but Growing			
Health and Personal Care Stores	0.75	0.011	5,755
Weakness and Declining			
Electronics and Appliance Stores	0.64	-0.157	7,753

If one considers total taxable sales, defined as the industries included in this analysis, Accommodations along with Food Services and Drinking places accounts for 27.6% of total taxable sales, followed by Motor Vehicles and Parts Dealers at 14.5% of total taxable sales. For most counties, motor vehicles represents the one largest category because of the expensive nature of cars, boats, trucks, and motorcycles, etc.

While tourism and recreation remain vital to the Door County economy, growth in sectors that may not be as dependent on tourism, such as General Merchandise Stores or Building Material and Hardware Supply Stores, is suggesting that the Door County economy may be diversifying. Why this perceived shift might be occurring is beyond the scope of this analysis, but there are important insights that can be gained.

Figure 3: Service Sector Cluster -- Door County 2010 to 2017

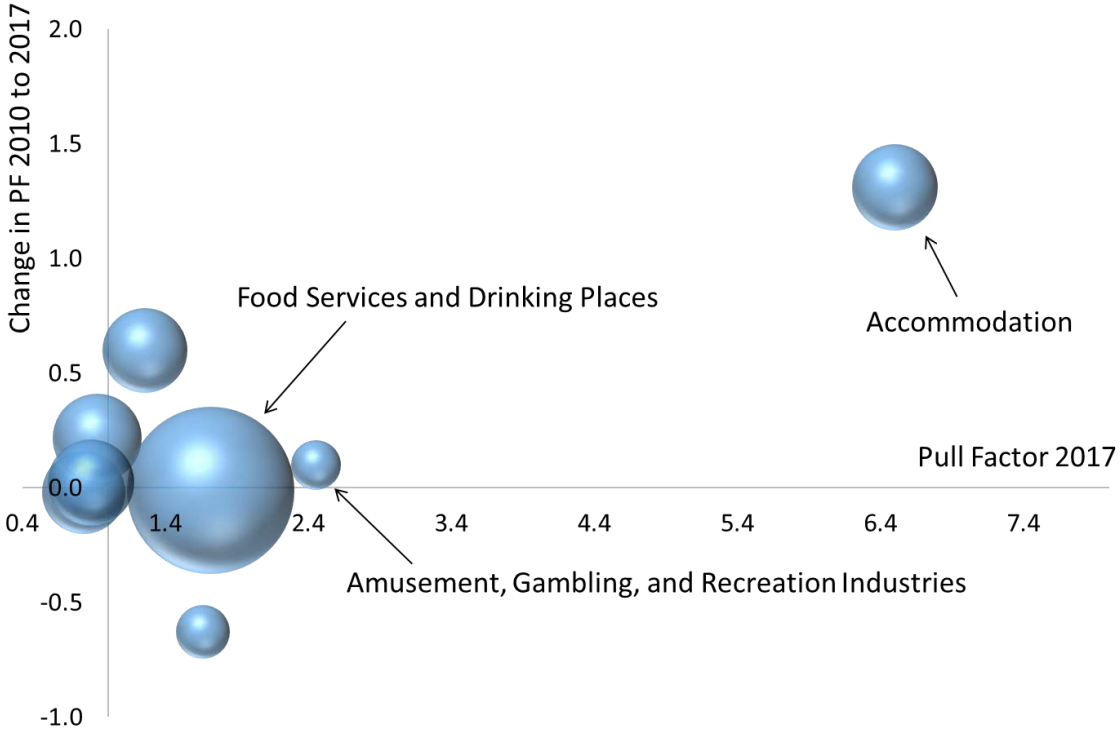


Table 5: Service Clusters for Door County

	Pull Factor 2017	Change Pull Factor 2010-2017	Potential Sales 2017 ($000)
Strength and Growing			
Accommodation	6.50	1.310	13,221.0
Amusement, Gambling, and Recreation Industries	2.45	0.100	4,428.8
Personal and Laundry Services	1.26	0.598	12,871.5
Strength but Declining			
Food Services and Drinking Places	1.72	-0.011	50,659.1
Administrative and Support Services	1.66	-0.628	5,072.5
Weakness but Growing			
Professional, Scientific, and Technical Services	0.93	0.217	14,175.6
Repair and Maintenance	0.88	0.022	13,245.1
Weakness and Declining			
Rental and Leasing Services	0.83	-0.021	12,462.3

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[4] as well as the collection of resources at the USDA National Rural Resource Library and the references therein.[5]

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) Provide convenient parking or public transit.

7) Ensure that key public services (e.g., fire and police, water and sewer, general administration) are more than satisfactory.

[4] http://www.uwex.edu/ces/cced/publicat/letstalk.html
[5] http://www.nal.usda.gov/ric/ricpubs/downtown.html

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.

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Pull Factors Retail Sectors (2017)

	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 Clothing Accessories Stores	Sporting Goods, Hobby, Book, and Music Stores	General Merchandise Stores	Miscellaneous Store Retailers	Nonstore Retailers
Adams	1.151	0.402	0.350	0.665	1.420	-	1.892	0.111	0.339	0.307	1.014	2.057
Ashland	1.133	0.445	0.486	0.908	-	-	1.035	0.607	0.359	2.470	0.942	1.126
Barron	1.277	0.684	1.099	2.040	0.903	0.725	1.361	0.546	0.987	1.819	1.761	1.268
Bayfield	0.712	0.388	0.280	1.618	1.154	-	1.045	0.488	0.459	0.138	0.725	0.884
Buffalo	0.915	-	1.186	0.724	-	-	-	0.135	0.624	0.121	0.841	0.956
Burnett	0.920	0.300	0.490	0.962	-	-	-	0.186	1.128	0.406	1.276	1.014
Chippewa	1.489	0.583	1.675	0.583	0.590	0.575	1.206	0.269	1.926	1.302	1.537	0.983
Clark	1.179	0.859	2.383	0.843	0.561	-	1.170	0.150	0.309	0.170	1.046	1.058
Columbia	1.211	0.733	0.549	0.589	0.691	0.799	2.047	0.395	0.300	0.668	1.057	0.982
Crawford	1.097	0.436	0.924	0.571	1.128	-	-	0.479	0.271	2.421	1.162	6.240
Dane	0.912	1.492	1.092	0.891	1.256	1.348	0.626	1.204	1.304	0.826	1.059	1.168
Dodge	1.154	0.772	0.418	0.804	0.716	0.683	1.490	0.229	0.853	1.057	0.990	1.017
Door	1.342	1.355	0.643	1.061	1.319	0.754	1.120	1.625	1.261	1.111	1.789	1.001
Douglas	0.947	0.464	0.586	1.510	1.232	-	1.898	0.256	0.792	1.138	1.127	0.806
Dunn	1.076	0.683	0.976	0.671	0.895	0.700	1.549	0.367	0.832	1.686	1.170	1.112
Eau Claire	1.000	0.685	3.871	1.785	0.958	1.030	0.956	1.886	3.713	1.458	1.234	0.885
Florence	0.562	-	-	0.348	-	-	-	-	-	-	0.407	1.191
Fond du Lac	0.817	1.214	0.730	0.970	0.900	1.099	1.123	0.663	0.638	1.087	0.827	0.817
Forest	1.316	0.516	-	5.136	-	-	-	0.290	-	-	0.794	1.467
Grant	0.997	0.498	0.429	1.734	0.880	0.619	1.195	0.397	0.420	0.737	0.917	0.803
Green	1.142	0.776	0.902	0.945	0.906	0.648	-	0.334	0.383	0.790	1.088	1.026

Pull Factors Retail Sectors (2017)

	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 Clothing Accessories Stores	Sporting Goods, Hobby, Book, and Music Stores	General Merchandise Stores	Miscellaneous Store Retailers	Nonstore Retailers
Green Lake	1.353	1.419	0.502	0.887	-	-	-	0.245	0.986	0.966	1.028	0.759
Iowa	1.176	0.774	0.814	1.042	0.613	-	1.501	0.191	0.230	0.895	0.718	1.781
Iron	0.775	-	-	1.423	-	-	-	-	-	-	1.017	0.928
Jackson	1.124	-	0.645	0.594	-	-	-	0.155	0.129	1.734	0.893	0.802
Jefferson	1.054	0.958	0.385	1.076	0.692	0.989	1.451	2.285	0.549	0.879	0.912	0.920
Juneau	1.333	0.413	0.482	0.645	0.771	1.073	3.317	0.187	0.765	0.367	1.084	0.979
Kenosha	0.885	1.047	1.060	0.766	1.207	1.406	0.981	3.041	1.410	1.072	0.856	0.945
Kewaunee	0.916	0.208	0.283	0.367	-	-	1.019	0.127	0.254	0.105	0.626	0.590
La Crosse	1.077	0.808	2.036	1.587	0.949	1.135	1.788	1.609	1.821	1.767	1.520	0.895
Lafayette	1.135	0.446	0.305	0.847	-	-	-	0.122	-	0.241	0.650	0.779
Langlade	1.590	0.682	1.064	2.168	0.752	-	1.291	0.279	0.864	2.274	0.693	1.072
Lincoln	1.429	0.867	1.403	0.511	1.235	0.777	1.526	0.172	1.899	0.801	0.756	1.459
Marathon	1.182	1.028	1.233	1.572	0.779	0.860	1.191	1.181	1.508	1.340	1.030	0.895
Marinette	1.320	0.479	0.834	1.546	1.595	0.745	1.357	0.461	0.956	1.257	1.275	0.923
Marquette	1.188	0.591	1.355	0.451	0.679	-	1.619	0.104	0.732	0.127	1.085	1.179
Milwaukee	0.779	1.039	0.857	0.589	1.248	1.505	0.682	1.405	0.733	0.833	0.868	0.808
Monroe	1.215	0.425	0.608	0.902	0.532	0.461	2.474	0.246	0.527	1.684	0.852	1.060
Oconto	1.202	0.519	0.425	0.722	0.541	-	1.393	0.117	0.442	0.162	0.585	0.938
Oneida	1.775	1.792	1.448	2.898	1.801	1.205	0.996	0.781	1.685	2.074	1.083	1.362
Ozaukee	0.732	1.105	0.935	0.563	0.790	0.842	0.563	0.607	0.791	0.711	0.685	0.727
Pepin	0.939	-	1.234	1.306	-	-	-	-	-	0.285	1.313	0.862

Pull Factors Retail Sectors (2017)

	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 Clothing Accessories Stores	Sporting Goods, Hobby, Book, and Music Stores	General Merchandise Stores	Miscellaneous Store Retailers	Nonstore Retailers
Pierce	0.674	0.420	0.431	0.552	0.830	0.191	1.061	0.188	0.375	0.118	0.768	0.848
Polk	0.984	0.702	0.623	2.100	1.115	0.282	0.850	0.118	0.687	0.955	1.148	0.889
Portage	1.190	1.191	1.919	1.474	0.903	0.806	1.674	0.747	1.214	1.539	1.041	1.011
Price	1.091	0.740	0.761	0.999	-	-	1.480	0.110	0.580	0.203	1.020	0.960
Richland	1.220	0.406	0.763	0.543	-	-	1.772	0.278	0.510	1.862	1.007	0.733
Rock	1.182	0.757	1.060	1.221	1.470	1.059	1.424	0.893	1.271	1.247	1.079	0.920
Rusk	1.167	-	-	1.377	-	-	-	0.190	-	1.375	0.996	0.820
Sauk	1.163	1.197	0.627	2.424	0.846	1.850	1.435	2.835	1.881	1.409	1.147	1.419
Sawyer	1.628	1.600	0.948	1.718	1.249	-	-	0.916	1.011	2.530	1.089	0.928
Shawano	1.398	0.573	0.695	0.943	0.888	0.748	1.022	0.320	0.811	1.042	1.055	0.753
Sheboygan	0.926	0.884	0.952	0.947	0.477	0.821	0.779	0.517	0.862	1.203	0.765	0.735
St. Croix	0.889	0.557	0.564	1.492	1.090	0.624	1.429	0.350	0.511	1.088	0.906	0.975
Taylor	1.245	0.444	1.797	1.214	-	-	1.288	0.186	0.603	1.374	0.658	0.798
Trempealeau	1.065	3.381	0.898	1.005	0.286	0.147	-	0.161	0.417	0.195	1.236	1.159
Vernon	1.154	0.515	0.816	0.511	0.541	-	1.254	0.203	0.364	0.911	0.993	1.610
Vilas	1.459	2.264	1.533	1.194	1.867	0.980	1.531	0.443	1.765	0.139	1.189	0.881
Walworth	1.164	1.119	1.346	1.292	0.816	0.952	1.245	0.730	0.739	1.090	0.897	0.945
Washburn	1.547	0.698	0.566	1.270	-	-	1.260	0.403	2.053	0.172	1.589	1.056
Washington	0.975	1.116	0.650	1.167	0.866	0.985	0.947	0.486	0.648	1.035	1.024	1.595
Waupaca	1.236	0.627	0.670	0.411	1.327	1.145	1.644	0.259	0.431	0.969	1.064	0.867
Waushara	1.097	0.854	0.343	0.549	0.897	-	1.419	0.202	0.748	0.115	1.051	0.810
Wood	1.145	1.063	0.617	0.813	0.852	0.714	1.158	0.379	0.917	1.318	1.297	1.232

Pull Factors Service Sectors (2017)

	Specialty Trade Contractors	Telecommunications	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
Adams	0.876	1.759	0.538	0.527	0.749	5.084	5.148	0.640	1.309	0.595
Ashland	1.362	1.261	0.890	0.741	1.104	-	1.383	1.131	1.356	1.493
Barron	0.726	1.097	0.770	0.559	1.121	0.976	0.823	0.837	0.932	1.104
Bayfield	0.946	1.451	0.710	0.754	1.118	2.986	2.291	0.868	0.913	0.472
Buffalo	0.644	0.971	0.325	0.770	0.333	-	-	0.601	0.611	0.436
Burnett	0.495	1.291	0.511	0.493	0.910	-	0.829	1.066	1.331	0.372
Chippewa	1.160	1.039	0.880	0.714	0.685	0.846	0.614	0.781	1.383	0.924
Clark	0.769	0.782	0.510	0.463	0.360	-	-	0.504	1.104	0.435
Columbia	1.850	1.101	0.592	0.938	0.568	1.601	0.963	0.750	1.113	0.862
Crawford	2.521	1.292	0.581	0.546	0.291	-	1.582	1.040	0.966	1.341
Dane	1.114	1.088	1.039	1.548	1.378	0.664	0.964	1.063	0.814	1.003
Dodge	0.909	0.983	1.291	0.792	0.536	0.590	0.202	0.602	0.986	0.574
Door	1.450	0.991	0.831	0.927	1.663	2.455	6.500	1.721	0.882	1.261
Douglas	1.604	1.446	0.884	0.793	0.601	0.713	0.735	1.183	1.531	1.205
Dunn	0.879	1.184	0.468	0.653	0.843	0.502	0.355	0.779	0.968	0.641
Eau Claire	0.987	1.076	0.882	1.485	0.960	1.735	0.866	1.218	1.423	0.705
Florence	0.573	0.918	0.499	0.267	-	-	-	1.035	1.180	-
Fond du Lac	1.425	0.826	2.863	0.675	0.662	1.632	0.513	0.843	1.123	0.644
Forest	1.130	1.030	0.368	0.434	0.429	-	0.768	0.713	0.612	0.463
Grant	1.212	1.143	0.397	0.459	0.414	0.530	0.197	0.644	1.457	0.615
Green	1.312	0.966	0.667	0.659	0.604	0.471	0.390	0.624	0.996	0.922

Pull Factors Service Sectors (2017)

	Specialty Trade Contractors	Telecommunications	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
Green Lake	0.802	0.906	1.058	0.717	0.584	0.687	1.299	0.551	0.708	0.645
Iowa	0.883	1.068	0.427	0.810	0.580	0.454	0.687	0.715	1.183	0.398
Iron	-	1.339	1.851	0.712	0.559	-	2.138	1.263	0.872	0.429
Jackson	3.136	1.053	0.999	0.642	1.131	-	0.995	0.782	0.838	0.563
Jefferson	1.148	0.949	0.829	0.835	0.675	0.810	0.266	0.882	1.117	0.721
Juneau	2.055	1.408	0.509	0.479	0.411	0.653	1.158	0.962	1.374	0.790
Kenosha	0.695	0.912	1.039	0.947	0.920	1.148	0.265	1.148	0.932	1.819
Kewaunee	0.459	0.798	0.605	0.349	0.325	-	0.244	0.348	0.638	0.577
La Crosse	1.512	1.091	0.922	1.126	0.900	1.114	1.104	1.266	1.433	0.834
Lafayette	1.650	0.976	0.376	0.278	0.269	-	-	0.428	0.713	0.839
Langlade	0.911	0.864	0.426	0.700	0.915	-	-	0.965	1.632	0.546
Lincoln	1.438	0.747	0.915	0.625	0.652	1.390	0.293	0.821	1.077	0.438
Marathon	0.817	0.836	0.972	0.977	0.855	1.286	0.729	0.860	1.205	0.760
Marinette	1.182	1.119	0.928	0.833	0.702	0.537	0.732	0.896	1.125	1.616
Marquette	1.641	1.409	0.847	0.401	0.344	-	0.946	0.598	1.228	0.649
Milwaukee	0.888	1.011	1.255	1.273	1.279	0.681	0.912	1.193	0.835	1.340
Monroe	1.169	1.196	0.725	0.441	0.365	0.492	0.983	0.978	0.921	0.773
Oconto	1.529	1.064	0.726	0.287	0.678	1.026	0.209	0.593	0.580	0.475
Oneida	0.953	0.804	1.360	0.633	1.412	2.794	1.706	1.173	1.318	0.604
Ozaukee	0.502	0.600	0.671	0.728	1.077	0.567	0.260	0.614	0.637	1.384
Pepin	0.482	0.950	0.306	0.876	-	-	-	0.774	1.235	0.622

Pull Factors Service Sectors (2017)

	Specialty Trade Contractors	Telecommunications	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
Pierce	0.751	1.007	0.913	0.349	0.350	0.396	0.172	0.570	0.522	0.615
Polk	0.471	0.928	0.801	0.700	0.956	0.619	0.297	0.706	1.197	0.492
Portage	1.532	1.067	1.187	1.120	1.079	0.575	0.820	1.018	1.051	0.847
Price	0.533	0.944	0.522	0.369	1.205	-	0.742	0.583	1.249	0.988
Richland	0.620	1.035	0.321	0.980	1.045	-	0.322	0.502	1.147	0.375
Rock	0.853	1.036	0.910	0.711	0.828	3.765	0.653	1.132	1.057	0.829
Rusk	0.587	1.031	0.425	0.351	1.532	-	1.041	0.578	1.135	0.432
Sauk	1.445	1.015	0.841	1.087	1.032	4.618	11.482	2.356	0.980	1.222
Sawyer	1.009	1.046	0.588	0.855	2.467	-	3.814	1.374	1.362	0.691
Shawano	1.327	1.080	0.856	0.450	1.023	0.722	0.515	0.872	1.219	0.644
Sheboygan	0.920	0.739	0.854	1.118	0.525	0.909	0.792	0.773	0.833	0.771
St. Croix	0.602	1.126	1.025	0.672	0.991	1.267	0.361	0.911	0.972	0.651
Taylor	0.546	0.777	0.427	0.534	0.654	-	-	0.538	1.285	0.392
Trempealeau	1.105	1.124	0.401	0.616	0.398	-	0.241	0.669	1.030	0.500
Vernon	0.777	1.300	0.505	0.511	0.639	0.468	0.346	0.508	0.825	0.513
Vilas	1.556	0.841	0.928	0.756	1.575	2.918	3.273	1.300	1.534	0.923
Walworth	0.915	0.815	1.139	0.779	1.161	0.987	3.210	1.323	1.039	1.162
Washburn	0.708	1.033	0.400	0.449	1.894	-	0.753	0.868	0.868	0.663
Washington	0.558	0.802	0.841	0.919	0.946	0.921	0.226	0.812	1.303	1.478
Waupaca	0.918	0.896	0.762	0.409	0.604	1.505	0.636	0.748	0.817	0.664
Waushara	0.853	1.229	0.804	0.415	0.308	2.026	0.913	0.635	1.331	0.595
Wood	0.941	1.152	0.821	0.741	0.630	0.548	0.559	0.802	1.834	0.549

Surplus or Leakage (2017, in thousands of dollars)

	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 Clothing Accessories Stores	Sporting Goods, Hobby, Book, and Music Stores	General Merchandise Stores	Miscellaneous Store Retailers	Nonstore Retailers
Adams	4,854.3	(2,448.9)	(2,382.9)	(5,585.5)	3,583.7	(2,720.8)	5,670.3	(5,694.9)	(2,196.5)	(15,954.0)	193.1	7,126.9
Ashland	3,431.4	(1,821.4)	(1,510.3)	(1,234.4)	(6,846.4)	(2,181.0)	177.4	(2,016.8)	(1,708.2)	27,141.6	(646.0)	681.5
Barron	24,922.9	(3,617.1)	1,016.7	48,440.9	(2,307.5)	(2,090.4)	6,427.4	(8,124.1)	(120.9)	52,785.3	29,412.7	5,057.3
Bayfield	(8,098.1)	(2,191.1)	(2,308.2)	9,001.4	1,150.8	(2,378.5)	251.7	(2,863.7)	(1,570.2)	(17,363.8)	(3,328.3)	(681.9)
Buffalo	(2,104.2)	(3,171.7)	528.6	(3,554.7)	(6,613.7)	(2,106.9)	(4,923.3)	(4,286.6)	(968.0)	(15,682.3)	(1,700.2)	(229.0)
Burnett	(2,117.6)	(2,355.4)	(1,535.0)	(514.7)	(7,018.7)	(2,235.9)	(5,224.7)	(4,284.4)	348.7	(11,249.2)	3,138.9	75.9
Chippewa	57,458.7	(6,237.2)	9,046.1	(25,388.6)	(12,801.0)	(4,223.7)	4,782.1	(17,103.9)	11,241.2	25,410.6	27,138.3	(408.4)
Clark	10,121.5	(1,016.2)	8,904.3	(4,596.6)	(6,592.7)	(4,778.8)	1,896.8	(9,562.0)	(4,033.0)	(33,576.4)	1,123.9	691.6
Columbia	24,863.4	(4,021.9)	(6,075.4)	(25,137.7)	(9,690.2)	(2,004.4)	24,460.3	(14,238.9)	(8,539.0)	(28,080.9)	2,893.2	(442.9)
Crawford	2,675.1	(1,985.6)	(238.8)	(6,140.7)	942.6	(2,340.5)	(5,469.3)	(2,867.7)	(2,082.9)	28,159.1	1,927.1	30,405.3
Dane	(114,777.7)	81,999.8	13,778.9	(73,516.2)	88,836.2	38,507.7	(96,704.8)	53,083.4	41,051.1	(162,684.5)	33,064.9	46,151.4
Dodge	24,239.7	(4,574.1)	(10,466.9)	(15,986.1)	(11,921.9)	(4,231.6)	15,289.7	(24,226.0)	(2,390.3)	6,500.5	(666.2)	566.6
Door	23,270.5	3,076.3	(2,764.1)	2,160.3	5,762.8	(1,414.1)	1,608.6	8,459.4	1,834.0	5,402.7	23,059.1	12.6
Douglas	(3,965.1)	(5,141.6)	(3,558.9)	19,909.2	4,647.4	(6,374.0)	13,375.8	(11,152.3)	(1,618.2)	7,422.1	4,118.0	(3,067.5)
Dunn	5,499.2	(2,926.6)	(196.9)	(12,361.5)	(2,022.8)	(1,840.2)	7,874.5	(9,146.8)	(1,259.5)	35,611.5	5,311.6	1,702.9
Eau Claire	(98.9)	(8,012.1)	65,371.1	81,166.7	(2,251.5)	501.5	(1,748.8)	35,244.3	56,009.6	65,466.0	20,108.7	(4,823.6)
Florence	(4,251.1)	(1,237.8)	(1,107.7)	(3,278.4)	(2,581.1)	(822.2)	(1,921.4)	(1,935.0)	(1,004.2)	(6,961.1)	(2,477.6)	388.9
Fond du Lac	(37,111.6)	5,553.4	(6,267.0)	(3,145.3)	(5,377.5)	1,711.1	4,935.2	(13,624.2)	(7,609.8)	12,629.9	(15,158.6)	(7,796.4)
Forest	4,497.8	(878.5)	(1,623.3)	30,495.5	(3,782.4)	(1,204.9)	(2,815.6)	(2,014.4)	(1,471.6)	(10,200.7)	(1,263.0)	1,394.7
Grant	(294.7)	(5,892.6)	(5,990.7)	34,980.7	(2,925.0)	(2,967.1)	3,557.9	(11,051.6)	(5,520.9)	(17,352.6)	(3,302.4)	(3,802.2)
Green	10,973.3	(2,197.6)	(866.6)	(2,208.7)	(1,933.1)	(2,298.2)	(15,261.5)	(10,228.8)	(4,919.0)	(11,585.7)	2,929.1	420.2
Green Lake	13,181.1	1,990.3	(2,120.1)	(2,181.4)	(9,914.9)	(3,158.5)	(7,380.7)	(5,608.1)	(54.2)	(901.5)	449.1	(1,888.1)

Surplus or Leakage (2017, in thousands of dollars)

	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 Clothing Accessories Stores	Sporting Goods, Hobby, Book, and Music Stores	General Merchandise Stores	Miscellaneous Store Retailers	Nonstore Retailers
Adams	4,854.3	(2,448.9)	(2,382.9)	(5,585.5)	3,583.7	(2,720.8)	5,670.3	(5,694.9)	(2,196.5)	(15,954.0)	193.1	7,126.9
Ashland	3,431.4	(1,821.4)	(1,510.3)	(1,234.4)	(6,846.4)	(2,181.0)	177.4	(2,016.8)	(1,708.2)	27,141.6	(646.0)	681.5
Barron	24,922.9	(3,617.1)	1,016.7	48,440.9	(2,307.5)	(2,090.4)	6,427.4	(8,124.1)	(120.9)	52,785.3	29,412.7	5,057.3
Bayfield	(8,098.1)	(2,191.1)	(2,308.2)	9,001.4	1,150.8	(2,378.5)	251.7	(2,863.7)	(1,570.2)	(17,363.8)	(3,328.3)	(681.9)
Buffalo	(2,104.2)	(3,171.7)	528.6	(3,554.7)	(6,613.7)	(2,106.9)	(4,923.3)	(4,286.6)	(968.0)	(15,682.3)	(1,700.2)	(229.0)
Burnett	(2,117.6)	(2,355.4)	(1,535.0)	(514.7)	(7,018.7)	(2,235.9)	(5,224.7)	(4,284.4)	348.7	(11,249.2)	3,138.9	75.9
Chippewa	57,458.7	(6,237.2)	9,046.1	(25,388.6)	(12,801.0)	(4,223.7)	4,782.1	(17,103.9)	11,241.2	25,410.6	27,138.3	(408.4)
Clark	10,121.5	(1,016.2)	8,904.3	(4,596.6)	(6,592.7)	(4,778.8)	1,896.8	(9,562.0)	(4,033.0)	(33,576.4)	1,123.9	691.6
Columbia	24,863.4	(4,021.9)	(6,075.4)	(25,137.7)	(9,690.2)	(2,004.4)	24,460.3	(14,238.9)	(8,539.0)	(28,080.9)	2,893.2	(442.9)
Crawford	2,675.1	(1,985.6)	(238.8)	(6,140.7)	942.6	(2,340.5)	(5,469.3)	(2,867.7)	(2,082.9)	28,159.1	1,927.1	30,405.3
Dane	(114,777.7)	81,999.8	13,778.9	(73,516.2)	88,836.2	38,507.7	(96,704.8)	53,083.4	41,051.1	(162,684.5)	33,064.9	46,151.4
Dodge	24,239.7	(4,574.1)	(10,466.9)	(15,986.1)	(11,921.9)	(4,231.6)	15,289.7	(24,226.0)	(2,390.3)	6,500.5	(666.2)	566.6
Door	23,270.5	3,076.3	(2,764.1)	2,160.3	5,762.8	(1,414.1)	1,608.6	8,459.4	1,834.0	5,402.7	23,059.1	12.6
Douglas	(3,965.1)	(5,141.6)	(3,558.9)	19,909.2	4,647.4	(6,374.0)	13,375.8	(11,152.3)	(1,618.2)	7,422.1	4,118.0	(3,067.5)
Dunn	5,499.2	(2,926.6)	(196.9)	(12,361.5)	(2,022.8)	(1,840.2)	7,874.5	(9,146.8)	(1,259.5)	35,611.5	5,311.6	1,702.9
Eau Claire	(98.9)	(8,012.1)	65,371.1	81,166.7	(2,251.5)	501.5	(1,748.8)	35,244.3	56,009.6	65,466.0	20,108.7	(4,823.6)
Florence	(4,251.1)	(1,237.8)	(1,107.7)	(3,278.4)	(2,581.1)	(822.2)	(1,921.4)	(1,935.0)	(1,004.2)	(6,961.1)	(2,477.6)	388.9
Fond du Lac	(37,111.6)	5,553.4	(6,267.0)	(3,145.3)	(5,377.5)	1,711.1	4,935.2	(13,624.2)	(7,609.8)	12,629.9	(15,158.6)	(7,796.4)
Forest	4,497.8	(878.5)	(1,623.3)	30,495.5	(3,782.4)	(1,204.9)	(2,815.6)	(2,014.4)	(1,471.6)	(10,200.7)	(1,263.0)	1,394.7
Grant	(294.7)	(5,892.6)	(5,990.7)	34,980.7	(2,925.0)	(2,967.1)	3,557.9	(11,051.6)	(5,520.9)	(17,352.6)	(3,302.4)	(3,802.2)
Green	10,973.3	(2,197.6)	(866.6)	(2,208.7)	(1,933.1)	(2,298.2)	(15,261.5)	(10,228.8)	(4,919.0)	(11,585.7)	2,929.1	420.2
Green Lake	13,181.1	1,990.3	(2,120.1)	(2,181.4)	(9,914.9)	(3,158.5)	(7,380.7)	(5,608.1)	(54.2)	(901.5)	449.1	(1,888.1)

Surplus or Leakage (2017, in thousands of dollars)

	Specialty Trade Contractors	Telecommunications	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	(557.8)	10,881.7	(2,719.5)	(3,167.2)	(602.8)	8,552.0	25,926.3	(8,612.8)	1,935.1	(2,461.6)	13,618.2
Ashland	1,303.2	2,996.0	(520.4)	(1,388.9)	199.8	(1,678.5)	1,916.9	2,515.7	1,786.6	2,404.2	23,002.2
Barron	(3,435.2)	3,904.0	(3,795.6)	(8,276.3)	813.1	(137.8)	(3,098.7)	(10,897.9)	(1,194.1)	1,771.1	127,456.0
Bayfield	(211.8)	5,646.5	(1,493.4)	(1,442.1)	246.5	3,635.6	7,053.1	(2,764.3)	(478.8)	(2,806.8)	(22,995.5)
Buffalo	(1,237.1)	(322.1)	(3,079.7)	(1,191.8)	(1,238.0)	(1,621.4)	(4,840.3)	(7,394.6)	(1,886.0)	(2,656.5)	(70,279.2)
Burnett	(1,862.3)	3,430.7	(2,366.4)	(2,793.0)	(177.9)	(1,720.7)	(876.7)	1,301.5	1,701.6	(3,141.0)	(39,476.1)
Chippewa	2,622.3	2,028.0	(2,591.0)	(6,995.9)	(2,759.7)	(1,178.2)	(8,815.3)	(19,162.2)	8,766.8	(1,682.3)	39,146.4
Clark	(1,819.4)	(5,497.5)	(5,075.1)	(6,322.8)	(2,694.4)	(3,677.7)	(10,978.6)	(20,869.7)	1,139.2	(6,034.2)	(103,248.0)
Columbia	13,998.7	5,307.5	(8,836.0)	(1,531.2)	(3,802.1)	4,619.5	(845.7)	(22,033.0)	2,600.0	(3,086.8)	(59,623.3)
Crawford	5,867.8	3,594.8	(2,122.5)	(2,617.1)	(1,463.0)	(1,801.2)	3,129.7	824.5	(183.5)	1,783.1	49,996.3
Dane	20,729.8	51,220.1	9,236.8	149,346.0	36,815.3	(28,598.2)	(9,175.5)	61,708.4	(47,409.5)	698.3	193,361.9
Dodge	(2,009.6)	(1,212.9)	8,401.0	(6,836.1)	(5,466.0)	(4,215.0)	(24,489.2)	(46,750.4)	(443.4)	(12,727.3)	(123,615.3)
Door	4,267.8	(272.1)	(2,101.2)	(1,040.4)	3,364.6	6,443.0	72,715.2	36,504.9	(1,569.1)	3,355.5	192,136.2
Douglas	6,345.0	14,966.2	(1,598.3)	(3,243.5)	(2,243.7)	(1,406.7)	(3,874.6)	10,285.8	7,792.2	2,918.2	44,535.6
Dunn	(1,225.8)	5,960.1	(7,068.9)	(5,238.8)	(849.3)	(2,353.9)	(9,096.1)	(11,959.6)	(452.6)	(4,920.7)	(10,960.2)
Eau Claire	(375.7)	6,759.4	(4,333.5)	20,191.5	(602.1)	9,559.9	(5,216.2)	32,505.5	16,452.5	(11,133.1)	370,741.5
Florence	(579.3)	(354.7)	(891.4)	(1,485.6)	(724.8)	(632.8)	(1,889.0)	255.6	341.5	(1,839.1)	(34,988.4)
Fond du Lac	12,036.3	(15,765.3)	69,394.6	(13,751.1)	(5,128.1)	8,369.6	(19,233.2)	(23,814.1)	4,885.9	(13,691.8)	(67,958.0)
Forest	258.1	190.3	(1,649.7)	(1,680.0)	(606.8)	(927.3)	(641.6)	(3,038.9)	(1,075.9)	(1,447.4)	514.4
Grant	2,720.0	5,884.6	(10,178.2)	(10,392.3)	(4,022.6)	(2,819.7)	(14,381.6)	(24,443.1)	8,198.0	(6,703.6)	(76,699.8)
Green	3,360.9	(1,186.7)	(4,704.5)	(5,486.0)	(2,282.2)	(2,656.8)	(9,159.9)	(21,636.7)	(67.4)	(1,142.6)	(82,138.6)
Green Lake	(1,029.6)	(1,563.1)	396.0	(2,200.4)	(1,158.3)	(761.3)	2,166.4	(12,485.6)	(2,124.0)	(2,507.9)	(38,854.8)

Surplus or Leakage (2017, in thousands of dollars)

	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 Clothing Accessories Stores	Sporting Goods, Hobby, Book, and Music Stores	General Merchandise Stores	Miscellaneous Store Retailers	Nonstore Retailers
Polk	(1,331.3)	(3,109.5)	(3,516.9)	46,657.9	2,497.8	(4,978.3)	(2,422.7)	(14,379.1)	(2,651.5)	(2,623.1)	5,213.4	(1,899.5)
Portage	25,203.5	3,242.8	13,940.4	32,617.2	(3,415.6)	(2,181.3)	17,741.5	(6,695.8)	2,936.5	51,358.6	2,320.1	296.0
Price	2,423.5	(881.5)	(724.4)	(18.2)	(7,057.8)	(2,248.3)	2,524.4	(4,709.5)	(1,153.3)	(15,177.7)	229.4	(224.6)
Richland	6,655.3	(2,293.5)	(818.6)	(7,173.8)	(8,045.8)	(2,563.1)	4,623.7	(4,357.7)	(1,533.5)	18,698.2	94.2	(1,696.8)
Rock	53,066.6	(9,022.8)	1,977.2	33,412.9	36,389.3	1,447.5	24,463.3	(6,195.5)	8,161.0	51,582.4	9,847.4	(4,882.3)
Rusk	3,774.9	(2,881.7)	(2,578.8)	4,412.9	(6,009.0)	(1,914.2)	(4,473.1)	(3,649.9)	(2,337.9)	6,078.3	(42.2)	(855.9)
Sauk	20,395.3	3,155.9	(5,329.0)	92,498.0	(5,147.4)	9,018.9	10,785.1	45,847.0	11,427.4	36,799.1	7,934.5	11,025.0
Sawyer	19,059.3	2,318.7	(180.4)	11,285.4	2,008.3	(2,567.9)	(6,000.6)	(510.2)	36.0	33,258.8	1,157.2	(455.5)
Shawano	27,674.0	(3,786.3)	(2,418.6)	(2,067.2)	(2,062.6)	(1,482.8)	301.6	(9,430.8)	(1,362.0)	2,117.4	1,640.7	(3,600.2)
Sheboygan	(18,191.6)	(3,642.6)	(1,335.6)	(6,785.9)	(34,268.9)	(3,729.3)	(10,782.7)	(23,692.4)	(3,523.5)	35,868.6	(24,876.9)	(13,709.9)
St. Croix	(21,617.6)	(10,961.1)	(9,655.0)	49,431.1	4,634.6	(6,176.6)	16,478.1	(25,121.4)	(9,817.5)	12,215.5	(7,858.5)	(1,021.2)
Taylor	8,124.5	(2,355.5)	3,018.5	3,681.2	(8,829.0)	(2,812.6)	1,890.0	(5,385.7)	(1,362.4)	8,914.0	(4,884.9)	(1,405.3)
Trempealeau	3,606.6	16,952.9	(650.1)	158.3	(10,593.2)	(4,031.7)	(11,050.4)	(9,338.8)	(3,365.2)	(32,226.5)	5,663.0	1,859.8
Vernon	7,814.7	(3,137.7)	(1,068.8)	(12,865.5)	(6,200.0)	(4,301.6)	2,555.1	(8,069.7)	(3,340.2)	(3,238.8)	(146.3)	6,503.7
Vilas	22,083.1	7,755.0	2,926.9	4,835.1	11,095.2	(79.8)	5,059.7	(5,345.6)	3,809.8	(29,713.2)	3,907.5	(1,204.5)
Walworth	33,176.2	3,069.1	7,962.0	30,486.5	(9,880.5)	(823.2)	9,789.3	(10,851.4)	(5,449.3)	13,076.5	(8,976.4)	(2,341.5)
Washburn	16,501.9	(1,162.0)	(1,495.6)	4,229.1	(8,022.4)	(2,555.6)	1,551.8	(3,587.4)	3,285.8	(17,906.1)	7,654.1	351.6
Washington	(7,938.3)	4,613.1	(12,427.3)	26,985.2	(11,089.8)	(402.4)	(3,283.2)	(31,882.2)	(11,331.9)	7,860.4	3,242.0	38,879.2
Waupaca	23,517.0	(4,740.3)	(3,749.8)	(30,397.3)	8,663.7	1,222.5	12,708.5	(14,719.3)	(5,869.4)	(2,180.7)	2,736.6	(2,790.5)
Waushara	4,164.0	(797.8)	(3,209.0)	(10,014.5)	(1,169.2)	(3,627.8)	3,550.2	(6,811.8)	(1,116.4)	(27,174.9)	937.7	(1,711.3)
Wood	20,441.7	1,120.9	(6,148.7)	(13,626.8)	(5,529.1)	(3,407.1)	4,381.8	(17,408.1)	(1,206.3)	32,073.2	17,971.9	6,854.6

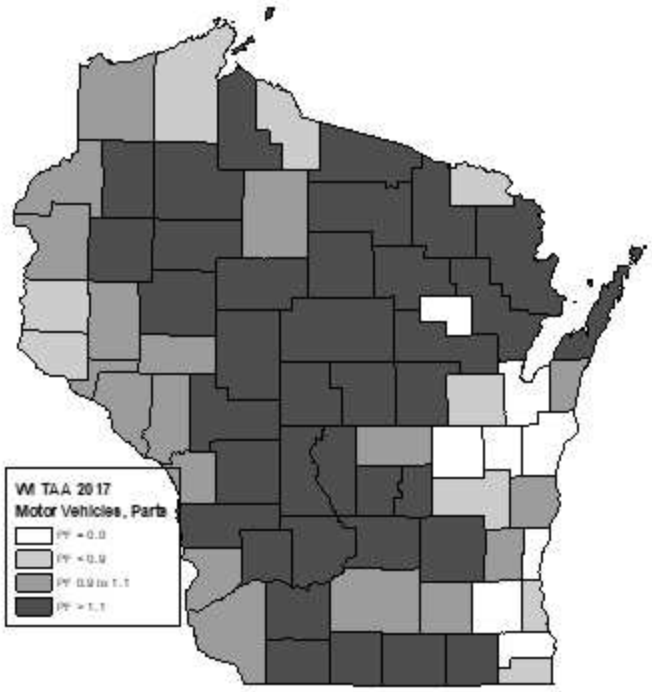
Surplus or Leakage (2017, in thousands of dollars)

	Specialty Trade Contractors	Telecommunications	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
Polk	(6,047.5)	(2,615.3)	(2,986.4)	(5,113.5)	(268.8)	(2,031.9)	(11,185.0)	(17,906.8)	3,146.8	(7,871.8)	(35,423.1)
Portage	9,878.5	3,947.0	4,563.4	3,324.2	785.0	(3,685.2)	(4,654.4)	1,830.2	1,320.1	(3,862.1)	150,810.6
Price	(1,731.0)	(659.6)	(2,328.6)	(3,494.6)	406.9	(1,730.3)	(1,332.7)	(8,243.6)	1,286.3	(57.9)	(44,903.0)
Richland	(1,606.5)	472.2	(3,766.6)	(125.8)	100.6	(1,972.5)	(3,992.7)	(11,234.3)	866.7	(3,580.2)	(23,250.7)
Rock	(5,965.5)	4,670.2	(4,830.4)	(17,581.3)	(3,739.6)	52,481.7	(19,680.7)	28,548.4	3,258.6	(9,455.1)	227,953.4
Rusk	(1,303.7)	316.6	(2,383.4)	(3,060.1)	897.6	(1,473.2)	179.6	(7,114.6)	593.3	(2,430.6)	(26,255.0)
Sauk	7,785.7	832.8	(3,659.3)	2,264.7	300.3	29,558.8	255,646.3	126,696.0	(486.0)	5,271.9	662,620.8
Sawyer	37.7	624.5	(2,293.6)	(919.1)	3,320.1	(1,976.2)	16,601.5	8,460.1	2,137.0	(1,774.2)	83,626.8
Shawano	3,176.1	2,485.3	(1,834.9)	(7,977.5)	121.4	(1,258.5)	(6,562.5)	(6,628.6)	2,966.1	(4,686.9)	(14,676.7)
Sheboygan	(2,765.7)	(28,620.0)	(6,580.4)	6,048.5	(8,739.2)	(1,453.7)	(9,948.1)	(41,763.9)	(8,021.8)	(10,664.9)	(221,179.8)
St. Croix	(10,786.6)	10,927.6	902.7	(13,285.9)	(137.2)	3,379.0	(24,125.3)	(12,812.2)	(1,057.6)	(12,819.7)	(69,284.9)
Taylor	(2,104.3)	(3,301.3)	(3,490.8)	(3,227.1)	(856.7)	(2,164.5)	(6,461.5)	(11,441.8)	1,844.3	(3,826.8)	(36,437.6)
Trempealeau	819.5	3,077.1	(6,130.0)	(4,472.9)	(2,509.4)	(3,639.3)	(8,247.9)	(13,771.8)	321.6	(5,288.3)	(82,856.8)
Vernon	(1,579.7)	6,793.6	(4,608.6)	(5,184.2)	(1,366.9)	(1,762.3)	(6,464.4)	(18,641.6)	(1,737.4)	(4,688.6)	(64,735.3)
Vilas	3,737.0	(3,418.2)	(639.0)	(2,450.6)	2,066.9	6,015.6	21,278.3	10,761.7	5,004.9	(700.2)	66,785.5
Walworth	(2,403.1)	(16,645.6)	5,128.0	(9,313.6)	2,426.8	(164.4)	86,691.4	48,530.7	1,547.4	6,168.8	181,203.7
Washburn	(1,232.1)	449.3	(3,321.4)	(3,470.9)	2,013.7	(1,966.8)	(1,447.4)	(2,960.6)	(773.6)	(1,926.1)	(15,790.5)
Washington	(19,219.2)	(27,462.9)	(9,071.4)	(5,287.9)	(1,251.7)	(1,599.0)	(46,850.1)	(43,658.2)	18,361.9	28,192.8	(104,621.1)
Waupaca	(1,138.4)	(4,623.9)	(4,354.7)	(12,279.1)	(2,948.7)	3,281.7	(7,058.9)	(18,737.9)	(3,559.3)	(6,344.1)	(73,362.2)
Waushara	(877.2)	4,381.9	(1,536.8)	(5,224.7)	(2,212.8)	2,864.7	(723.5)	(11,648.3)	2,760.8	(3,284.8)	(62,481.7)
Wood	(1,153.4)	9,561.4	(4,609.1)	(7,601.7)	(3,885.7)	(4,141.1)	(12,064.3)	(20,772.1)	22,838.6	(12,016.5)	1,674.0

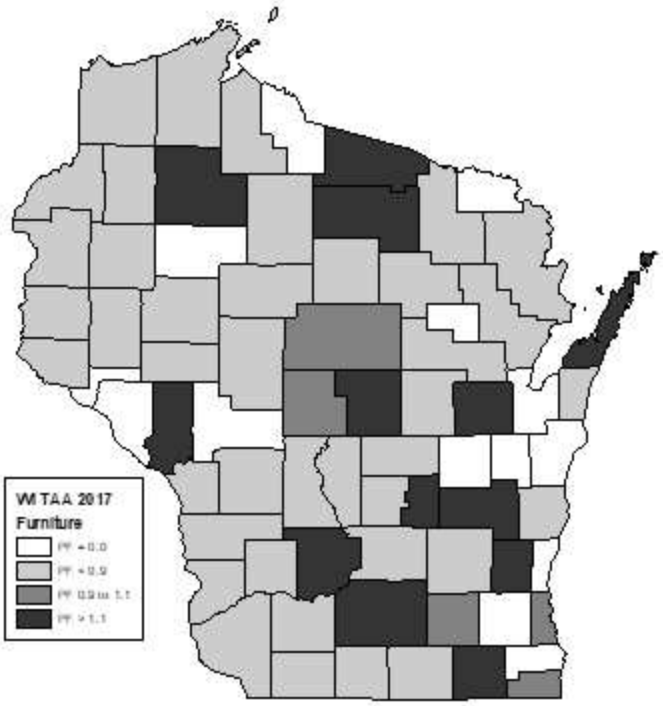
Surplus or Leakage (2017, in thousands of dollars)

	Specialty Trade Contractors	Telecommunications	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
Iowa	(768.2)	1,423.4	(4,925.6)	(1,858.7)	(1,468.3)	(1,667.4)	(2,853.3)	(9,966.0)	1,674.8	(5,341.2)	(35,791.9)
Iron	(1,585.0)	1,718.3	1,772.1	(682.9)	(373.7)	(739.9)	2,512.8	2,223.3	(283.6)	(1,227.3)	(17,363.9)
Jackson	10,832.7	861.5	(8.5)	(2,714.2)	355.4	(2,367.6)	(35.7)	(5,914.0)	(1,144.0)	(3,008.7)	(25,745.8)
Jefferson	3,236.5	(3,575.2)	(4,922.5)	(5,421.3)	(3,807.3)	(1,947.3)	(22,420.3)	(13,836.8)	3,583.3	(8,298.7)	(42,897.8)
Juneau	6,430.5	7,948.8	(3,935.7)	(4,749.6)	(1,920.2)	(986.7)	1,342.8	(1,237.6)	3,180.3	(1,739.7)	(3,926.2)
Kenosha	(13,524.7)	(12,414.3)	2,243.2	(3,504.5)	(1,901.3)	3,057.7	(45,335.8)	35,049.4	(4,216.1)	49,217.2	100,548.7
Kewaunee	(2,940.8)	(3,503.7)	(2,820.7)	(5,286.7)	(1,962.4)	(2,537.7)	(5,727.6)	(18,925.0)	(2,744.5)	(3,122.6)	(130,609.6)
La Crosse	17,203.9	9,757.6	(3,459.7)	6,321.6	(1,793.0)	1,792.3	4,871.9	47,700.0	20,285.7	(7,555.0)	476,683.2
Lafayette	2,899.7	(343.9)	(3,656.7)	(4,813.5)	(1,744.9)	(2,084.0)	(6,221.1)	(13,646.7)	(1,786.5)	(973.7)	(85,520.4)
Langlade	(436.4)	(2,131.1)	(3,686.6)	(2,190.4)	(223.4)	(2,282.9)	(6,815.1)	(921.5)	4,316.3	(3,010.4)	42,486.1
Lincoln	3,147.7	(5,808.0)	(798.3)	(4,022.1)	(1,336.4)	1,307.9	(7,075.6)	(6,880.6)	767.4	(5,474.5)	(19,523.3)
Marathon	(6,967.6)	(19,874.2)	(1,380.7)	(1,322.6)	(2,939.5)	5,068.1	(14,333.6)	(28,390.4)	10,867.9	(12,387.3)	145,784.9
Marinette	1,847.5	3,858.0	(962.5)	(2,526.3)	(1,617.8)	(2,192.5)	(3,796.3)	(5,633.3)	1,774.0	8,478.1	64,580.4
Marquette	2,230.7	4,544.1	(700.0)	(3,112.3)	(1,220.4)	(1,624.3)	(263.2)	(7,472.1)	1,109.2	(1,656.1)	(30,929.1)
Milwaukee	(28,769.8)	9,345.6	85,976.8	104,614.2	38,196.1	(38,237.9)	(31,444.8)	264,739.2	(59,139.3)	118,319.6	(570,690.4)
Monroe	1,850.8	6,854.5	(3,943.6)	(9,125.8)	(3,713.7)	(2,590.6)	(264.5)	(1,269.0)	(1,207.5)	(3,371.1)	15,209.3
Oconto	5,124.8	1,988.9	(3,478.7)	(10,311.6)	(1,666.6)	116.1	(10,666.1)	(21,057.8)	(5,680.2)	(6,893.6)	(137,374.6)
Oneida	(488.7)	(6,481.3)	4,888.5	(5,666.6)	2,274.0	8,647.5	10,165.1	9,556.4	4,590.2	(5,542.7)	247,567.7
Ozaukee	(20,192.6)	(51,882.0)	(17,545.8)	(16,481.7)	1,673.6	(8,204.3)	(41,877.2)	(83,707.9)	(20,547.7)	21,128.6	(570,431.5)
Pepin	(1,057.4)	(324.7)	(1,860.0)	(378.3)	(1,091.5)	(953.0)	(2,844.9)	(2,462.1)	668.4	(1,046.5)	(29,786.7)
Pierce	(2,760.3)	249.8	(1,267.1)	(10,790.5)	(3,858.9)	(3,128.4)	(12,810.6)	(25,477.5)	(7,402.3)	(5,797.3)	(215,357.0)

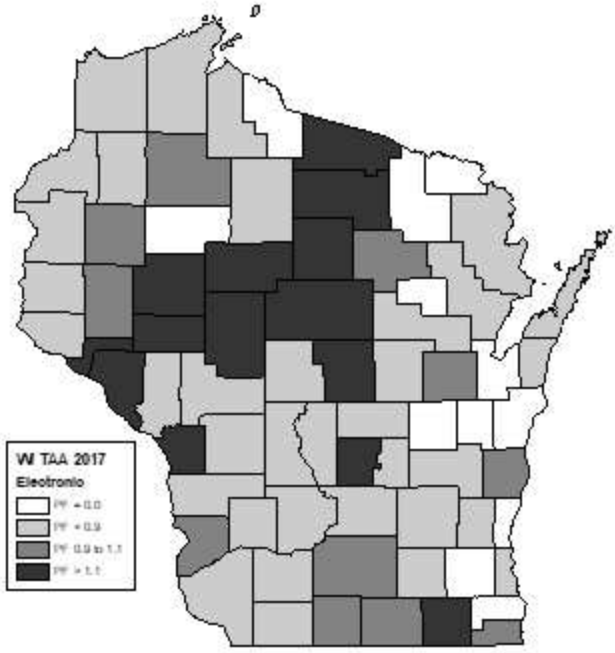
Pull Factors: Motor Vehicle and Parts Dealers 2017



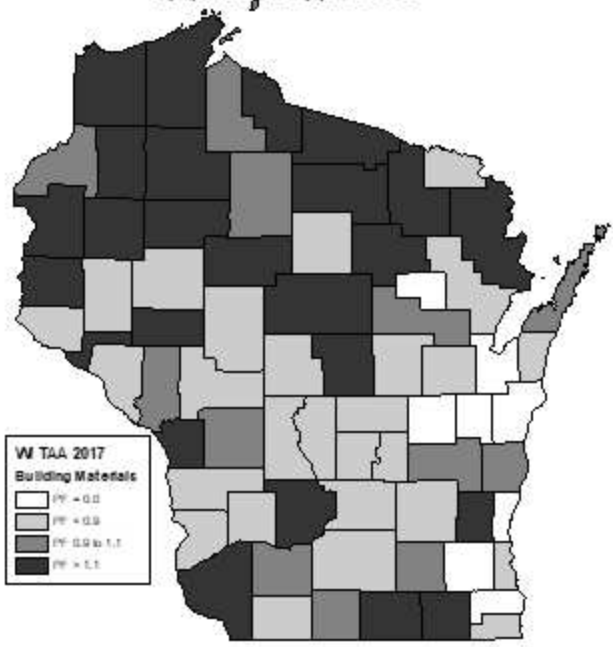
Pull Factors Furniture and Home Furnishings 2017



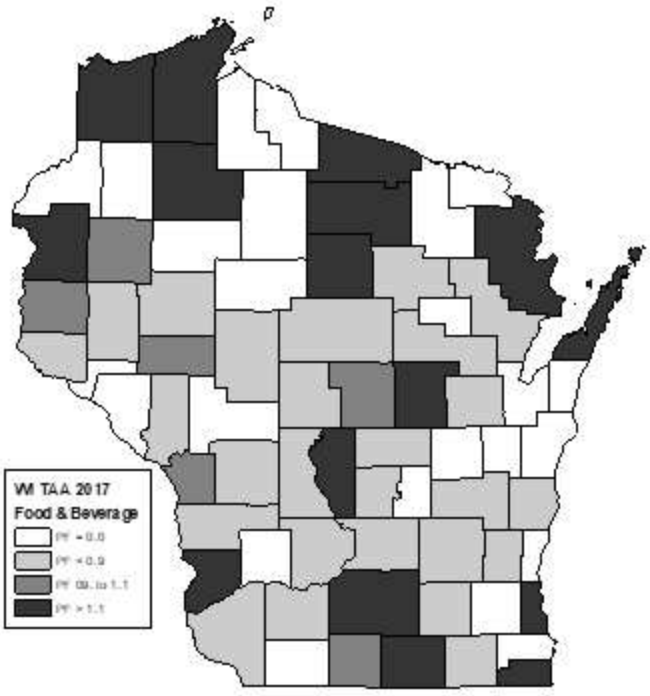
Pull Factors Electronics and Appliance 2017



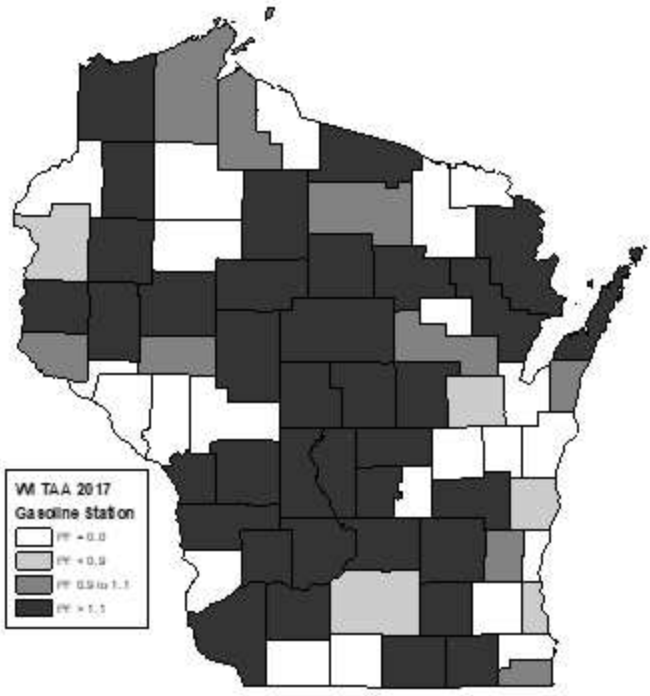
Pull Factors Building Material, Garden Equipment & Supplies 2017



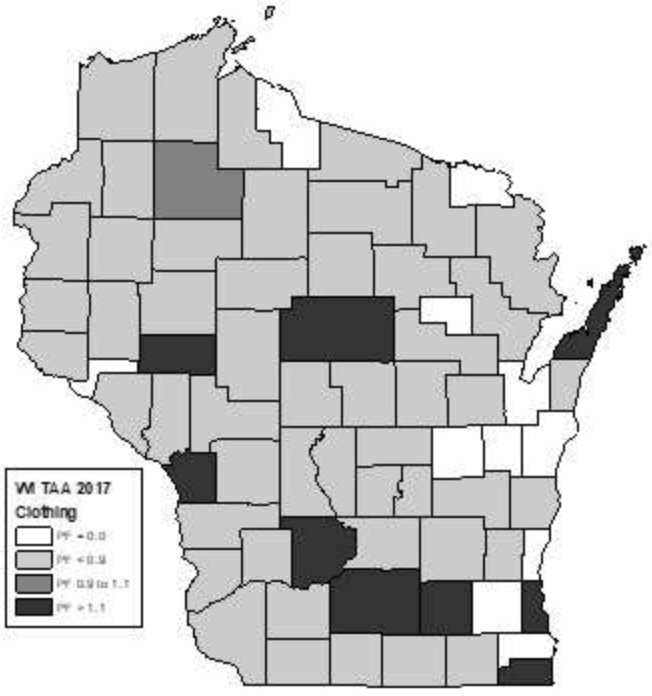
Pull Factors Food and Beverage Stores 2017



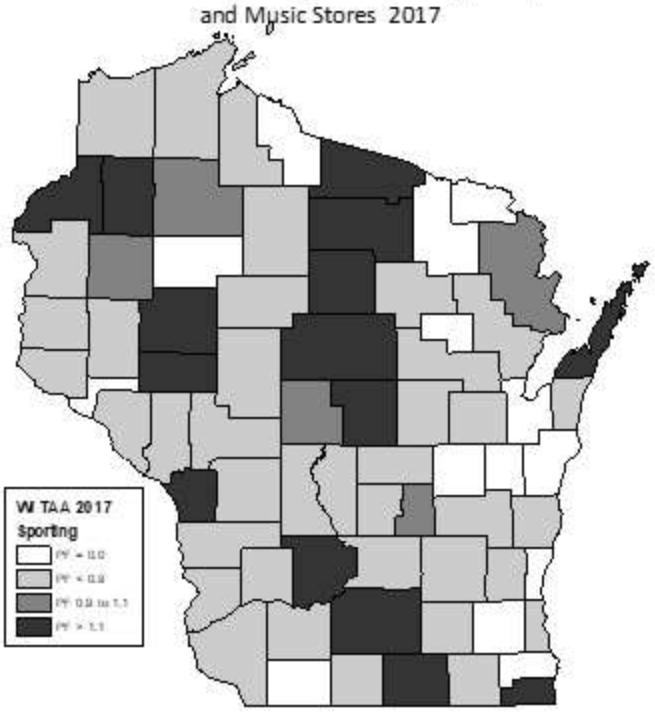
Pull Factors Gasoline Stations 2017



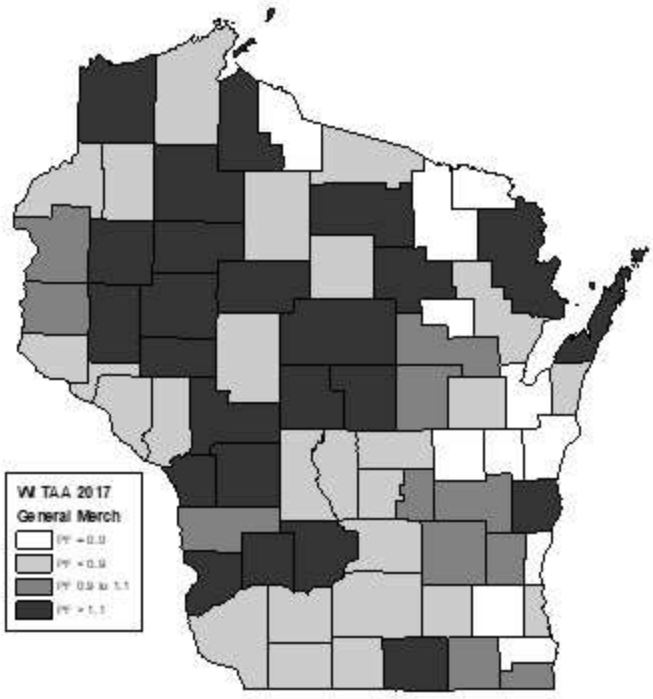
Pull Factors Clothing and Clothing Accessories Stores 2017



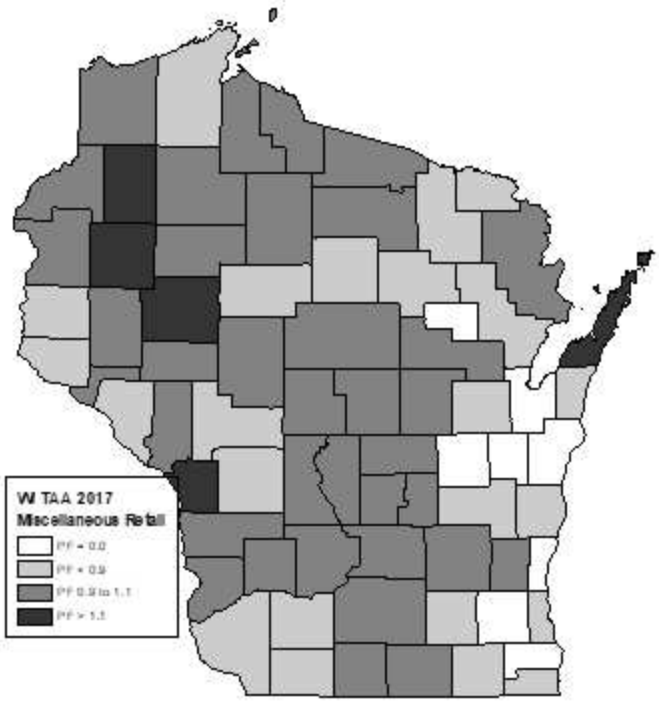
Pull Factors Sporting Goods, Hobby, Book, and Music Stores 2017



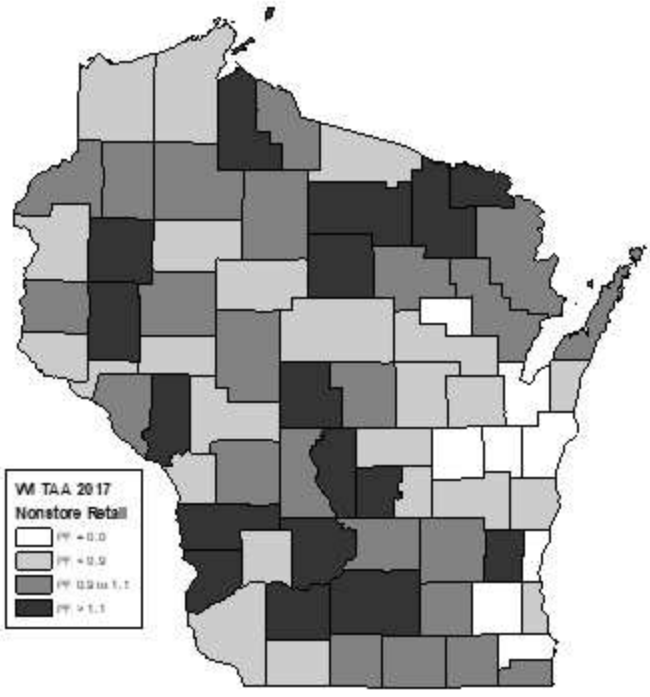
Pull Factors General Merchandise Stores 2017



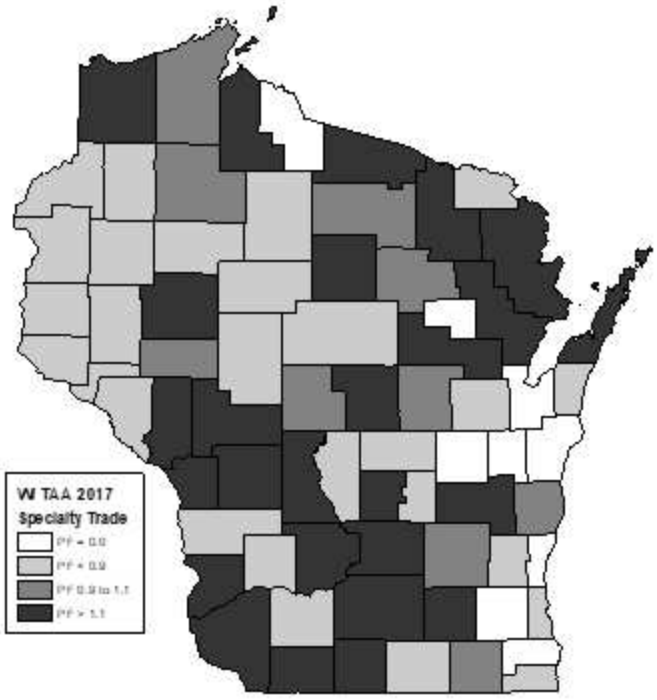
Pull Factors Miscellaneous Retail Stores 2017



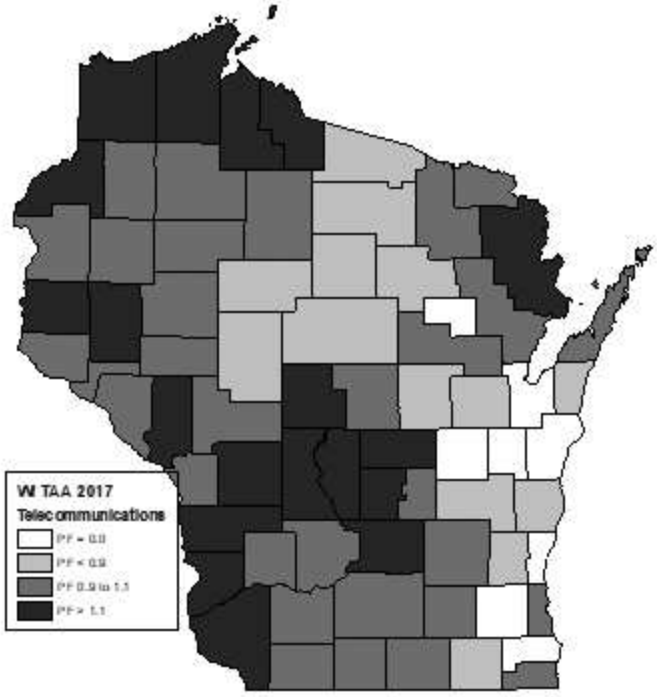
Pull Factors Nonstore Retailers 2017



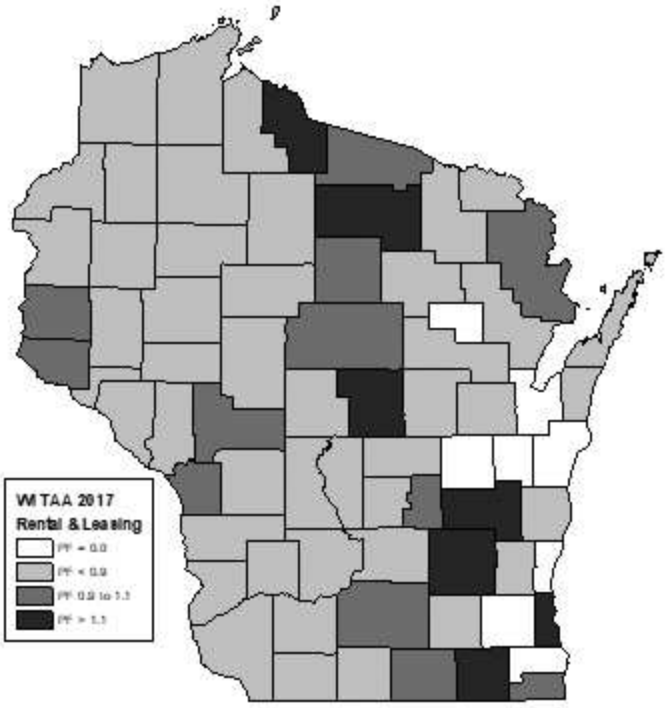
Pull Factors Specialty Trade Contractors 2017



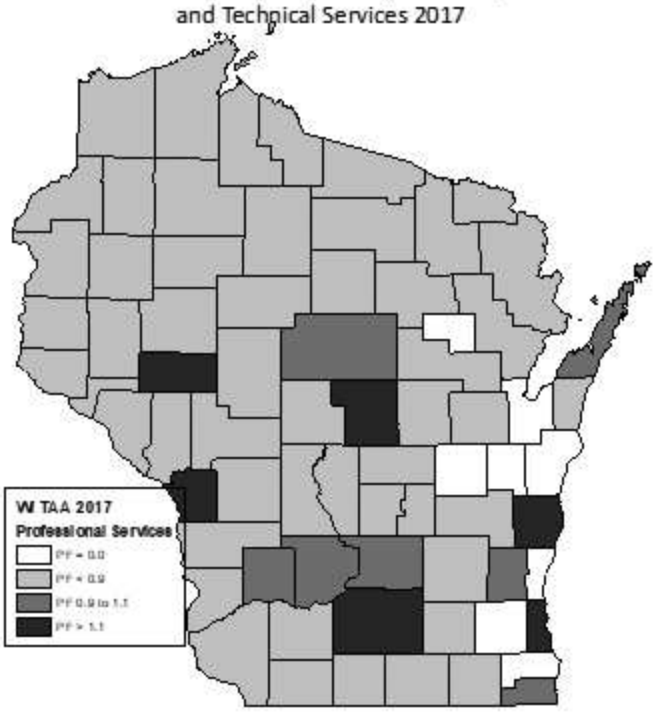
Pull Factors Telecommunications 2017



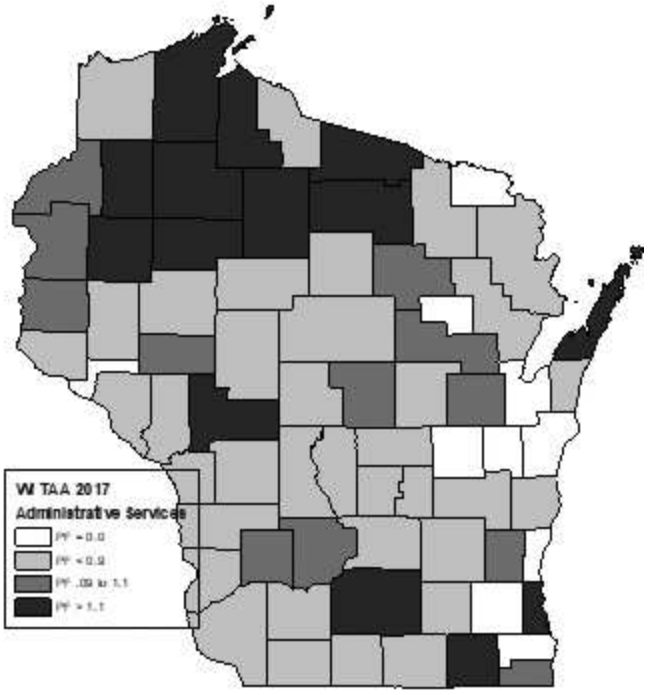
Pull Factors Rental and Leasing Services 2017



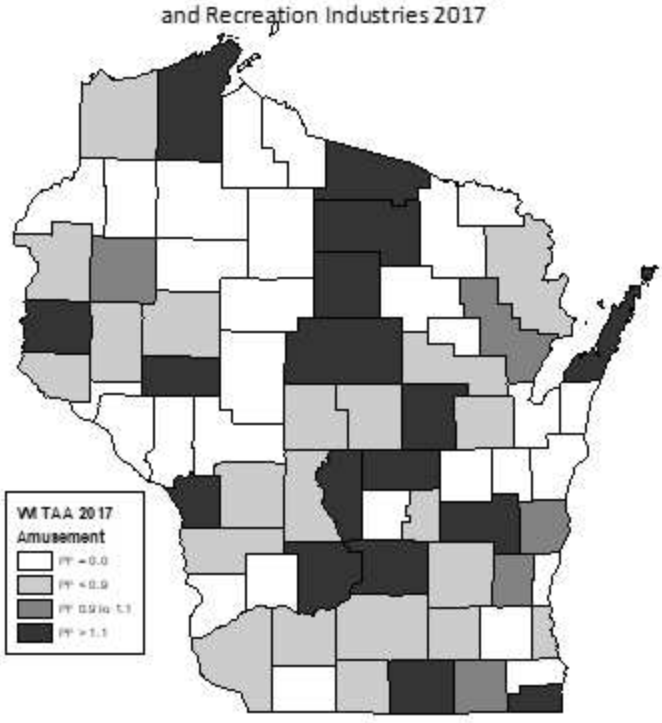
Pull Factors Professional, Scientific, and Technical Services 2017



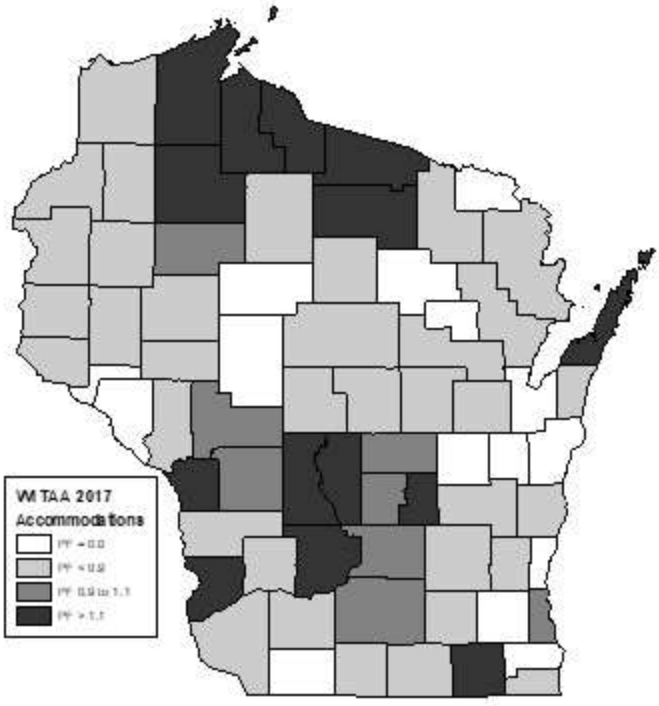
Pull Factors Administrative and Support Services 2017



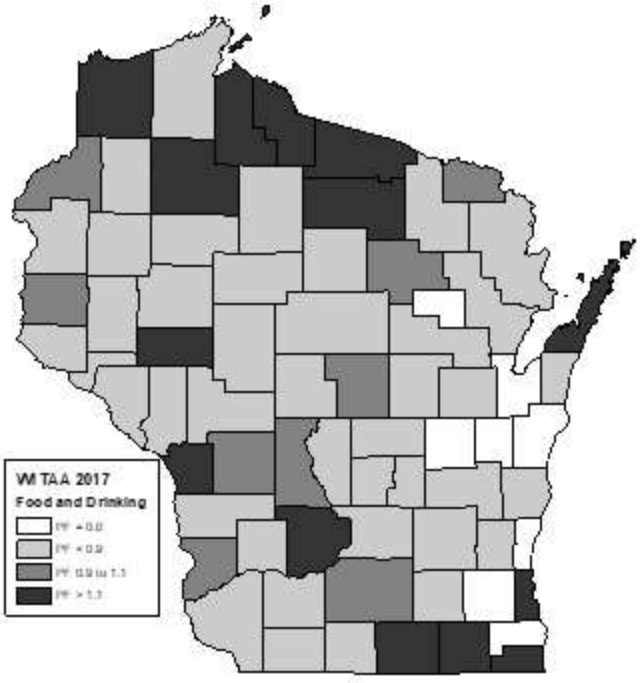
Pull Factors Amusement, Gambling, and Recreation Industries 2017



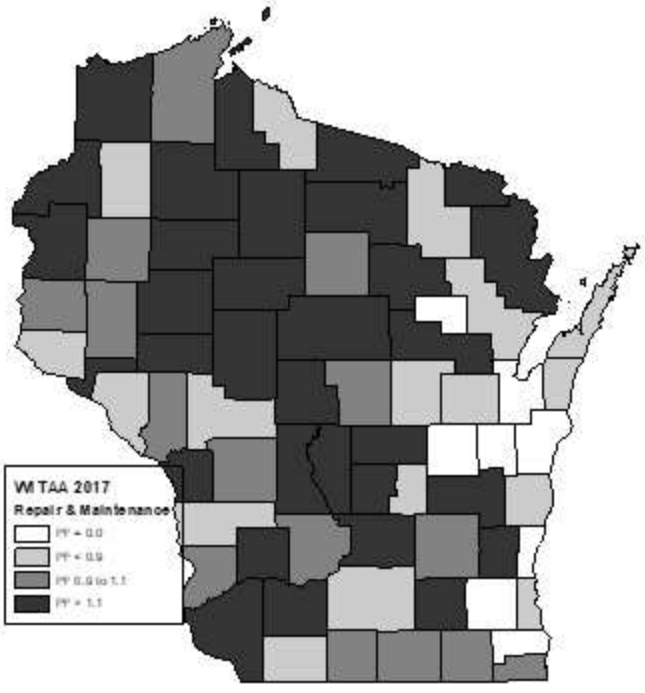
Pull Factors Accommodations 2017



Pull Factors Food Services and Drinking Places 2017



Pull Factors Repair and Maintenance Service 2017



Pull Factors Personal and Laundry Services 2017