



A TRADE AREA ANALYSIS OF WISCONSIN RETAIL AND SERVICE MARKETS: UPDATED FOR 2022

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Extension

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ABSTRACT



Using 2022 county sales tax data, we examine the strength and weaknesses of Wisconsin retail and service markets through the application of the tools of Trade Area Analysis. 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 and service markets are identified. We also offer a method for using the results of the Trade Area Analysis over the 2019 to 2022 to gain further insights into the strengths, weaknesses, opportunities and threats to local retail and service markets.



INTRODUCTION¹

When a community is exploring economic development options one area of interest is local retail and service markets. Communities naturally ask “are local retail and service businesses reaching their fullest potential, are there weaknesses that need to be addressed, or strengths that we can build upon?” 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.

1 | For a more detailed discussion of alternative methods to analyze local retail and service markets, see the UW-Madison, Division of Extension program entitled “Downtown and Business District Economic Development” by Bill Ryan at <https://economicdevelopment.extension.wisc.edu/programs/downtown-market-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 concerned 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

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. As such local knowledge of the retail and service markets are vital to properly interpreting the results and outlining response strategies.

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 business opportunities and consumer 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 market potential. But it may be the case that a neighboring community has a large concentration of automobile dealerships (a strength for that community) that draws customers from a wider range and 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.

One must also keep in mind that different types of businesses require different market sizes (populations) to be viable. This is often times talked about in terms of population thresholds and is outlined in more detail in an appendix to this report. Characteristics such as underlying costs of operating a retail or service business and the frequency of consumers making purchases.

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One must also keep in mind that different types of businesses require different market sizes (populations) to be viable. This is often times talked about in terms of population thresholds and is outlined in more detail in an appendix to this report. Characteristics such as underlying costs of operating a retail or service business and the frequency of consumers making purchases. For example, a new car dealership has a very different cost of operation than a tavern or restaurant and when coupled with frequency of purchases the market required for the car dealership is fundamentally different than the one for a tavern or restaurant. Thus, if the tools of TAA find a weakness in car dealerships for a small more rural county, this weakness can be easily understood. 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 allow 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. In an appendix to this report we provide a simple market threshold (what population is required to support one particular type of business) for Wisconsin.

For this 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):

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

where PS_c^i is potential sales in community c for sector i, P_c is population for community c, PCS_{state}^i is per capita sales at the state level for retail or service sector i, PCI_s is per capita income for Wisconsin and PCI_c is per capita income for the community or for this study the county.

Care must be used in accepting the computed potential sales from equation (1). It ignores all the shopping area and consumer characteristics that are located within the immediate and surrounding market. 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, such as age, 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:

$$TAC_c^i = \frac{AS_c^i}{PCS_s^i * \frac{PCI_c}{PCI_s}} \quad (2)$$

where notation remains the same with the addition of TAC is Trade Area Capture and AS_cⁱ is actual sales for the ith retail or service sector for community c.

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 community (or county for this study) 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 into 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:

$$PF_c^i = \frac{TAC_c^i}{P_c} \quad (3)$$

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 as a location quotient. Pull Factors significantly greater than one often indicate 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 one 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.

$$S/L_c^t = AS_c^t - PS_c^t \quad (4)$$

If actual sales (AS) are 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) are 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.

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 than 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?



CORE DATA FOR ANALYSIS


Before turning to the Trade Area Analysis for Wisconsin counties that have sales tax data, three core pieces of information are required. The first is the Index of Income, which is the per capita income of the county divided by the per capita income of Wisconsin, the second is the county population (Table 1), and the third are per capita expenditure levels for the state by business type (Table 2). For this analysis 68 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 68 counties that are contained in this analysis.

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. ESRI, or InfoGroup as well as 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.

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.

 Table 1: Base County Data: 2022

	Population	Per Capita Income	Index of Income		Population	Per Capita Income	Index of Income
Adams	21,226	46,650	0.768	Marathon	137,958	60,876	1.002
Ashland	16,039	46,901	0.772	Marinette	41,988	51,540	0.849
Barron	46,843	58,667	0.966	Marquette	15,779	47,116	0.776
Bayfield	16,608	54,549	0.898	Menominee	4,197	43,213	0.712
Brown	270,036	62,606	1.031	Milwaukee	918,661	58,054	0.956
Buffalo	13,391	52,657	0.867	Monroe	46,109	50,291	0.828
Burnett	17,036	49,017	0.807	Oconto	39,633	53,635	0.883
Calumet	52,718	61,802	1.018	Oneida	38,212	57,611	0.949
Chippewa	66,807	54,501	0.897	Outagamie	192,127	61,543	1.013
Clark	34,691	50,605	0.833	Ozaukee	93,009	97,526	1.606
Columbia	58,193	61,426	1.011	Pepin	7,410	58,416	0.962
Crawford	16,007	50,221	0.827	Pierce	42,532	57,094	0.940
Dane	568,203	75,935	1.250	Polk	45,709	54,204	0.892
Dodge	88,282	54,077	0.890	Portage	70,718	56,032	0.923
Door	30,526	70,452	1.160	Price	14,179	51,450	0.847
Douglas	44,144	51,869	0.854	Richland	17,090	51,645	0.850
Dunn	45,651	49,337	0.812	Rock	164,060	53,649	0.883
Eau Claire	106,837	58,431	0.962	Rusk	14,186	50,847	0.837
Florence	4,688	63,035	1.038	Sauk	65,777	61,125	1.006
Fond du Lac	103,836	59,007	0.972	Sawyer	18,559	50,907	0.838
Forest	9,381	47,484	0.782	Shawano	40,886	50,815	0.837
Grant	51,276	52,768	0.869	Sheboygan	117,841	60,859	1.002
Green	36,816	62,330	1.026	St. Croix	96,017	67,429	1.110
Green Lake	19,220	49,943	0.822	Taylor	19,975	50,700	0.835
Iowa	23,865	58,354	0.961	Trempealeau	30,899	50,731	0.835
Iron	6,224	54,091	0.891	Vernon	31,060	49,608	0.817
Jackson	20,836	52,168	0.859	Vilas	23,763	58,326	0.960
Jefferson	85,784	56,445	0.929	Walworth	105,380	61,716	1.016
Juneau	26,866	46,312	0.763	Washburn	16,911	54,397	0.896
Kenosha	167,817	61,259	1.009	Washington	137,688	70,229	1.156
Kewaunee	20,623	56,850	0.936	Waupaca	51,488	54,176	0.892
La Crosse	120,294	61,083	1.006	Waushara	24,999	48,249	0.794
Lafayette	16,877	51,198	0.843	Wood	73,993	54,661	0.900
Langlade	19,559	51,348	0.845				
Lincoln	28,376	52,709	0.868	Wisconsin	5,034,369	60,733	1.000

 Table 2: Per Capital Taxable Sales: Wisconsin 2022

441 - Motor Vehicle and Parts Dealers	2,602.00
442 - Furniture and Home Furnishings Stores	322.20
443 - Electronics and Appliance Stores	253.68
444 - Building Material and Garden Equipment and Supplies Dealers	1,493.78
445 - Food and Beverage Stores	1,033.33
446 - Health and Personal Care Stores	233.78
447 - Gasoline Stations	441.72
448 - Clothing and Clothing Accessories Stores	571.38
451 - Sporting Goods, Hobby, Book, and Music Stores	346.36
452 - General Merchandise Stores	1,454.26
453 - Miscellaneous Store Retailers	434.19
454 - Nonstore Retailers	1,729.11
Total Retail	10,915.78
517 - Telecommunications	553.40
518 - Data Processing, Hosting, and Related Services	82.90
519 - Other Information Services	95.05
522 - Credit Intermediation and Related Activities	92.44
524 - Insurance Carriers and Related Activities	7.95
531 - Real Estate	48.77
532 - Rental and Leasing Services	333.35
541 - Professional, Scientific, and Technical Services	459.77
551 - Management of Companies and Enterprises	94.12
561 - Administrative and Support Services	321.71
611 - Educational Services	32.96
621 - Ambulatory Health Care Services	20.91
711 - Performing Arts, Spectator Sports, and Related Industries	110.07
713 - Amusement, Gambling, and Recreation Industries	285.56
721 - Accommodation	384.52
722 - Food Services and Drinking Places	1,827.86
811 - Repair and Maintenance	496.83
812 - Personal and Laundry Services	244.76
Total Services	5,492.90
Total All Sectors Used In Analysis	16,408.68

Fifty-one of the 68 (75%) have an Index of Income strictly below one, but several, such as Sheboygan and Marathon (1.002), are very close to being exactly at the state average. Menominee County has the lowest Index of Income (0.712, which means that per capita income is only 71.2% of the state average) while Ozaukee has the highest Index of Income (1.606). 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.

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 \$2,602 in 2022. This result is largely attributed to the expensiveness of automobiles. The second largest single category of retail expenditures is nonstore retailers with \$1,729. These are retailers generally associated with having only on-line sales. Over time this is the single fastest growing retail sector. The next largest is building materials and garden equipment and supply stores at \$1,493 per capita sales. Coming out of the COVID-19 pandemic this particular sector has seen strong sales growth as more people are making investments in their homes. Also, while we do not track changes in consumer prices over time in this study, the costs of building materials has risen sharply over the recent past. Indeed, this rise in build material prices is a partial explanation for the rising costs of new home prices.

The third largest is general merchandise stores with \$1.454 per person sales. 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. Many of these latter establishments the businesses do not classify themselves as gasoline which creates some difficulties for measuring market strengths and weaknesses. Rather, the businesses report under a different business classification such as a convenience store (e.g., general merchandise).

For the services sectors food services and drinking places (restaurants and taverns/bars) at \$1,827 followed by telecommunication services which would include wireless and internet service providers (\$553).

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 third highest category is repair and maintenance services at \$496. Also note that in Wisconsin the typical spending on professional, scientific, and technical services is higher than accommodation (hotels, motels, B&Bs) (\$459 vs \$384). It is important to note that while the analysis is structured around per capita expenditures, embedded in these spending patterns are expenditures by businesses. For example, the category administrative and support services (NAICS 561) are businesses engaged in activities that support the day-to-day operations of other organizations. The processes employed in this sector (e.g., general management, personnel administration, clerical activities, cleaning activities) are often integral parts of the activities of businesses. For the purpose of Trade Area Analysis, the source of demand

(individuals, businesses or a combination) is less relevant than total expenditures. If, however, a community elects to further explore a particular sector in more depth, understanding the nature of demand is vital to moving forward.

Finally, the fact that the data used in this analysis is based on taxable sales which may not reflect total sales (or revenue) of a particular sector. Consider insurance carriers and related activities (NAICS 524) where Wisconsin taxable sales are almost eight dollars per person. For comparison, the U.S. Census Bureau estimates that in 2021 total revenues (sales) for this industry was \$2.9 trillion or about \$8,789 per person. This would include all payments to insurance companies for home, auto, life, and business insurance in addition to other items/services. Clearly, in Wisconsin only a very small part of the products/services offered for sale by insurance carriers and related activities are subject to the sales tax. While a detailed discussion what goods and services are subject to the Wisconsin sales tax is beyond

the scope of this study, the limitation of this data must be considered when interpreting the investment opportunities identified by the Trade Area Analysis offered in this study. Despite this limitation, these data are consistent across Wisconsin and available on an annual basis.

TRADE AREA ANALYSIS RESULTS

In addition to the tabular presentation of the results for Pull Factors and Surplus/Leakage² 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 four 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

² The results for the Trade Area Captured and Potential Sales calculations are available from the author.

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 detailed discussion we have left it to the reader to draw the relevant information for their own purposes. For brevity we have reported only the two 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.

The volume of results prevents a detailed discussion we have left it to the reader to draw the relevant information for their own purposes.

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.

 Table 3: Pull Factors Total Taxable Sales, Total Retail, Total Services 2022

	Total	Total Retail	Total Services		Total	Total Retail	Total Services
Adams	0.956	0.870	1.129	Lincoln	0.975	1.031	0.864
Ashland	1.129	1.264	0.859	Marathon	1.051	1.121	0.913
Barron	1.150	1.276	0.900	Marinette	1.159	1.262	0.955
Bayfield	0.871	0.736	1.138	Marquette	0.713	0.748	0.642
Brown	1.163	1.167	1.154	Menominee	0.177	0.212	0.108
Buffalo	0.588	0.573	0.617	Milwaukee	0.992	0.888	1.201
Burnett	0.800	0.841	0.716	Monroe	1.032	1.117	0.862
Calumet	0.888	1.028	0.607	Oconto	0.700	0.792	0.516
Chippewa	1.080	1.148	0.945	Oneida	1.594	1.734	1.317
Clark	0.633	0.702	0.496	Outagamie	1.184	1.258	1.038
Columbia	0.901	0.900	0.902	Ozaukee	0.697	0.725	0.641
Crawford	1.252	1.373	1.013	Pepin	0.665	0.662	0.672
Dane	0.912	0.876	0.984	Pierce	0.592	0.619	0.539
Dodge	0.883	0.947	0.757	Polk	0.950	1.100	0.651
Door	1.528	1.277	2.026	Portage	1.048	1.093	0.959
Douglas	1.022	1.015	1.035	Price	0.740	0.803	0.613
Dunn	0.885	0.940	0.775	Richland	0.854	0.956	0.652
Eau Claire	1.186	1.287	0.987	Rock	1.151	1.185	1.085
Florence	0.338	0.431	0.154	Rusk	0.777	0.856	0.622
Fond du Lac	0.953	0.975	0.909	Sauk	1.707	1.366	2.385
Forest	0.654	0.725	0.512	Sawyer	1.637	1.793	1.325
Grant	0.867	0.960	0.683	Shawano	1.001	1.053	0.900
Green	0.776	0.816	0.695	Sheboygan	0.952	0.938	0.979
Green Lake	0.963	1.132	0.628	St. Croix	0.891	0.910	0.854
Iowa	0.821	0.885	0.694	Taylor	0.824	0.955	0.564
Iron	0.692	0.633	0.810	Trempealeau	0.744	0.753	0.726
Jackson	0.792	0.864	0.649	Vernon	0.770	0.888	0.535
Jefferson	0.919	0.986	0.787	Vilas	1.507	1.351	1.817
Juneau	1.034	1.092	0.918	Walworth	1.219	1.132	1.392
Kenosha	0.999	1.044	0.910	Washburn	0.997	1.102	0.789
Kewaunee	0.593	0.649	0.481	Washington	0.924	0.966	0.840
La Crosse	1.168	1.171	1.161	Waupaca	0.926	0.990	0.798
Lafayette	0.615	0.622	0.600	Wausara	0.740	0.785	0.651
Langlade	1.184	1.413	0.728	Wood	1.019	1.094	0.871

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



Table 4: Surplus/Leakage Total Taxable Sales, Total Retail, Total Services in Millions of Dollars 2022

	Total	Total Retail	Total Services		Total	Total Retail	Total Services
Adams	(11.64)	(23.18)	11.53	Lincoln	(10.06)	8.32	(18.39)
Ashland	26.17	35.74	(9.56)	Marathon	116.42	182.14	(65.71)
Barron	111.65	136.45	(24.80)	Marinette	93.14	101.92	(8.79)
Bayfield	(31.64)	(42.97)	11.33	Marquette	(57.73)	(33.68)	(24.06)
Brown	744.32	508.23	236.08	Menominee	(40.34)	(25.70)	(14.64)
Buffalo	(78.47)	(54.06)	(24.41)	Milwaukee	(109.38)	(1,076.51)	967.13
Burnett	(45.23)	(23.81)	(21.43)	Monroe	19.79	48.70	(28.90)
Calumet	(99.03)	16.66	(115.69)	Oconto	(172.52)	(79.46)	(93.06)
Chippewa	78.70	96.68	(17.98)	Oneida	353.41	290.29	63.12
Clark	(173.96)	(93.90)	(80.06)	Outagamie	588.19	548.07	40.12
Columbia	(95.87)	(64.05)	(31.82)	Ozaukee	(742.09)	(447.62)	(294.48)
Crawford	54.76	53.82	0.93	Pepin	(39.16)	(26.31)	(12.85)
Dane	(1,020.47)	(957.84)	(62.63)	Pierce	(267.58)	(166.23)	(101.35)
Dodge	(150.27)	(45.38)	(104.89)	Polk	(33.63)	44.64	(78.27)
Door	306.66	107.06	199.60	Portage	51.41	66.07	(14.66)
Douglas	13.56	6.33	7.23	Price	(51.30)	(25.79)	(25.52)
Dunn	(70.16)	(24.24)	(45.92)	Richland	(34.70)	(6.90)	(27.80)
Eau Claire	314.24	321.53	(7.29)	Rock	359.73	291.98	67.75
Florence	(52.84)	(30.24)	(22.60)	Rusk	(43.39)	(18.69)	(24.69)
Fond du Lac	(77.81)	(27.65)	(50.16)	Sauk	767.83	264.29	503.54
Forest	(41.67)	(21.99)	(19.67)	Sawyer	162.49	134.74	27.76
Grant	(96.91)	(19.37)	(77.54)	Shawano	0.75	19.61	(18.86)
Green	(139.14)	(75.76)	(63.39)	Sheboygan	(93.06)	(79.40)	(13.66)
Green Lake	(9.51)	22.82	(32.32)	St. Croix	(189.79)	(104.41)	(85.38)
Iowa	(67.21)	(28.68)	(38.53)	Taylor	(48.12)	(8.19)	(39.93)
Iron	(28.01)	(22.21)	(5.80)	Trempealeau	(108.25)	(69.46)	(38.79)
Jackson	(61.02)	(26.49)	(34.53)	Vernon	(95.64)	(30.89)	(64.75)
Jefferson	(105.37)	(12.16)	(93.21)	Vilas	189.93	87.53	102.40
Juneau	11.29	20.55	(9.26)	Walworth	384.80	154.18	230.62
Kenosha	(1.54)	82.16	(83.70)	Washburn	(0.74)	16.81	(17.55)
Kewaunee	(128.94)	(73.94)	(55.00)	Washington	(198.26)	(58.42)	(139.84)
La Crosse	332.61	225.47	107.14	Waupaca	(55.76)	(4.81)	(50.95)
Lafayette	(89.99)	(58.71)	(31.28)	Waushara	(84.67)	(46.59)	(38.08)
Langlade	49.85	74.57	(24.72)	Wood	21.17	68.32	(47.16)

Negative values, or Leakages, in parentheses.

Consider first the Pull Factor for total taxable sales, total taxable retail sales and total taxable services sales (Table 3). In addition, a mapping of the Pull Factor for total taxable sales is provided in Map 1, total retail (Map 2) and total services (Map 3). The corresponding Surplus/Leakage estimates are provided in Table 4. Note that negative values, or Leakages, are in parentheses. Recall that a Pull Factor greater than one suggests that the sector is performing stronger than expected and the Surplus/Leakage value will be positive (Surplus). Here the Surplus can be interpreted as the dollar value of the Pull Factor being greater than one. If the Pull Factor is less than one the sector is performing weaker than expected and the Surplus/Leakage will be negative (Leakage). The Leakage value represents the dollar value of losses or the value of the Pull Factor being less than one.

In the strictest interpretation 24 of the 68 counties in this analysis, or 35.3%, have a Pull Factor for all taxable sales used in this study greater than one, suggesting that these 44 counties (64.7%) are experiencing Leakages of taxable retail and service activities. The three counties with the smallest Pull Factors

are Menominee (PF=0.177), Florence (PF=0.338), and Buffalo (PF=0.588, which translates to leakages of \$44.5 million, \$41.7 million, and \$65.2 million, respectively, while the counties with the largest Pull Factors are Sauk (PF=1.707), Sawyer (PF=1.637) and Oneida (PF=1.594), which translates into surpluses of \$767.8 million, \$162.5 million, and \$353.4 million, respectively. The large surpluses for these last three counties are 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.

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 than 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? The county with the largest retail leakage is Dane County at \$1,020.5 million (Pull Factor 0.912) while Ozaukee County had a leakage of \$742.1 million (Pull Factor

0.699). Milwaukee County had a total leakages of \$109.3 (Pull Factor 0.992) but a very large leakage in retail (\$1,076.5 million) but a sizable surplus in services (\$967.1). Clearly, these large dollar values are directly tied to the population size of these counties. Consider, for example, the smaller county of Iron with a population of 6,224 has a leakage of \$28.0 million or Forest County with only 9,381 people and a leakage of \$41.7 million.

The simple mapping of the aggregate Pull Factor (Map 1) reveals several interesting patterns. First, for descriptive purposes the Pull Factor can take on one of three values, less than 0.95, between the values of 0.95 and 1.05, and finally above 1.05. While a strict threshold value of 1.0 holds for the Pull Factor is a value of 0.95 or 1.05 in a practical sense different than 1.0? (see sidebar). For discussion purposes we have altered the thresholds slightly to allow for three outcomes: performing as one would expect (0.95 – 1.05), underperforming (<0.95) and overperforming (>1.05).

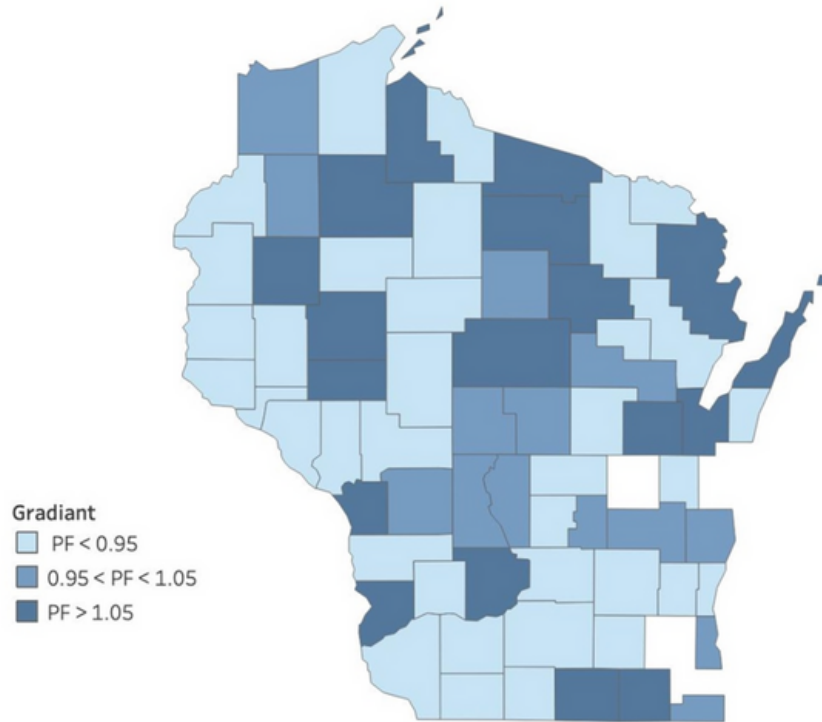
Second, when considering retail and service sectors together, some counties that contain what might be considered “hub cities” such as Green

Bay (Brown County), La Crosse (La Crosse County), and Eau Claire (Eau Claire County) stand out as having Pull Factors greater than 1.05. This is as might be expected as these “hub cities” draw retail and service expenditures. Indeed, Brown County has a total surplus of \$744.2 million, while La Crosse County has a surplus of \$332.6 million and Eau Claire County has a surplus of \$317.2 million. But not all cities that might be considered “hubs” are indeed performing as one might expect. For example, Madison is generally considered a “hub city” for south central Wisconsin, but the overall Pull Factor is 0.91 with a corresponding leakage of \$1.02 billion. Looking at individual sectors, the Dane County leakage is largely driven by motor vehicles and parts (\$484.6 million leakage) and building material, garden equipment and supplies (\$250.9 million leakage). Given the large leakage in car sales, one could suggest that the lingering effects of COVID induced supply chain issues has had an outsized impact on Dane County relative to the Wisconsin average. In addition, there are a number of more rural counties that are performing stronger than one might expect. For example Ashland County has an

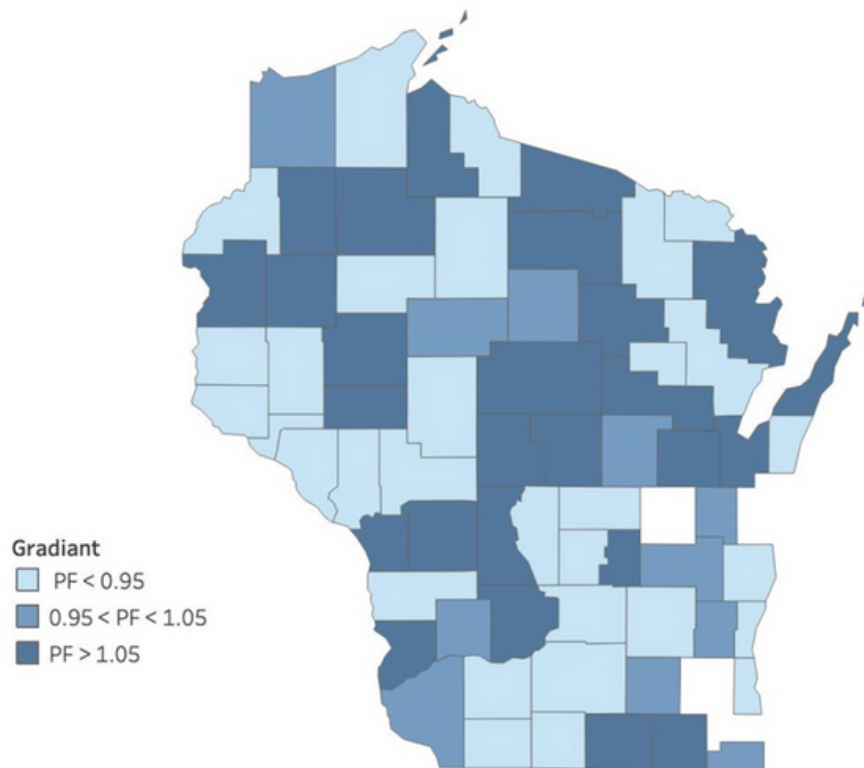
overall Pull Factor of 1.13 (surplus of \$26.2 million), Door County with a Pull Factor 1.53 (surplus of \$306.6 million) and Marinette County with a Pull Factor of 1.16 (surplus of \$93.1 million). Many of these strong showings can be attributed to tourism and recreation. For example, Door County has a surplus of \$87.7 million in accommodations (e.g., hotels, motels, etc.) and \$67.0 million surplus in food services (e.g., restaurants, etc.). Or high concentration of recreational housing which can significantly increase the seasonal population over the year-round population which is used to compute the Trade Area Analysis components.

Third, finer insights into overall market performances across Wisconsin can be obtained by looking at total retail (Map 2) and total services (Map 3). Notice that retail activity tends to be more evenly distributed across Wisconsin than services. Note Dane County again, the market is underperforming on retail sales, but performing at expectations in terms of services. But a handful of counties are doing well in both retail and services such as Brown, Door, Douglas and La Crosse. But the true insights are gained by examining the individual sectors that make up retail and services. The Pull Factors along with the corresponding surplus/leakages are provided in a series of tables and maps in an appendix to this report.

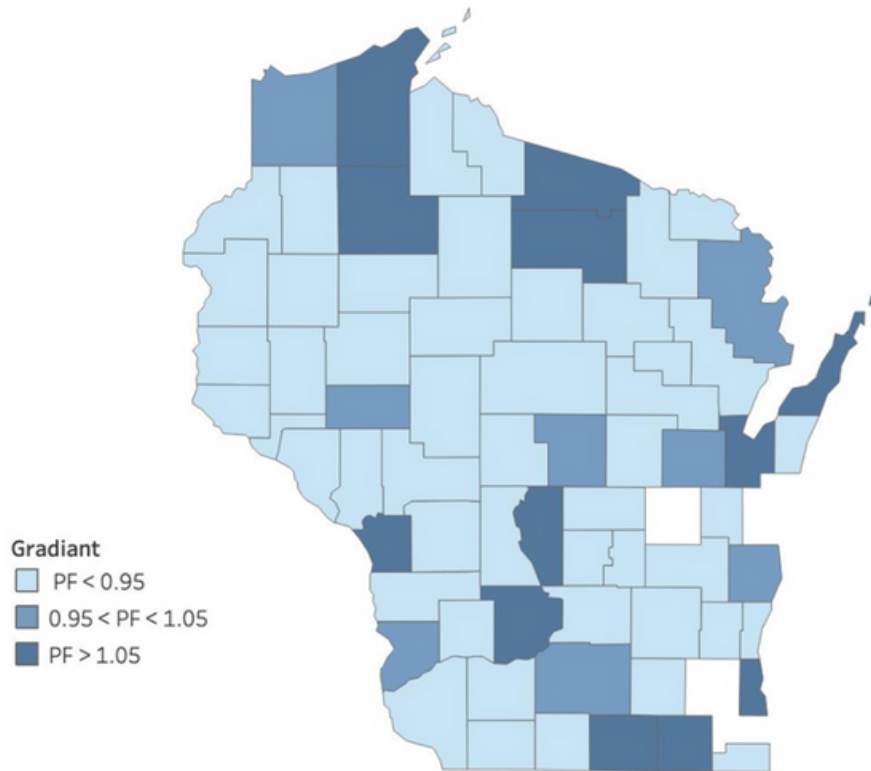
Map 1: Pull Factor Total Retail and Service Taxable Sales



Map 2: Pull Factor Total Retail Taxable Sales



Map 3: Pull Factor Total Services Taxable Sales



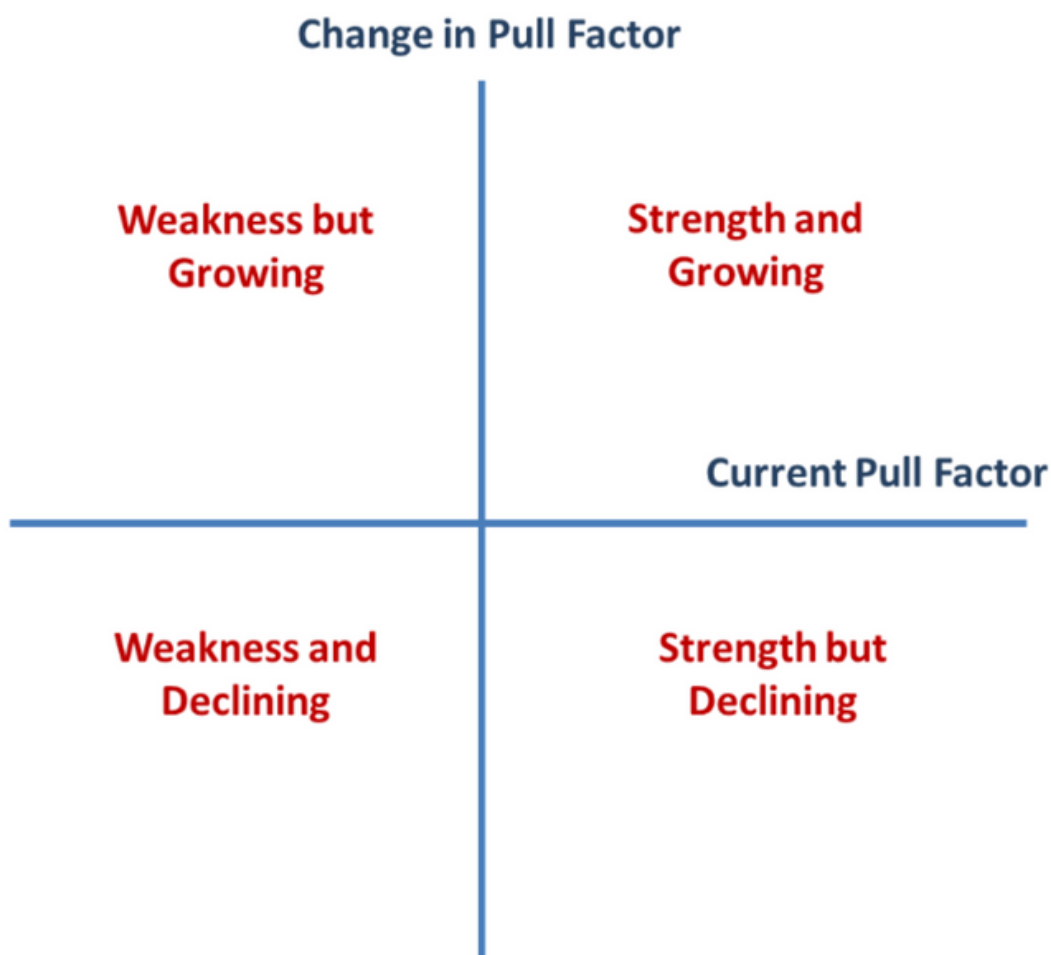
CLUSTER ANALYSIS OF RETAIL AND SERVICE SECTORS

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. This allows us to track the performance of local retail and service markets over time. 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. Here we look at levels and changes in 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 or service 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” and could be considered an opportunity; (3) the Pull Factor is great than one, hence a strength, but is declining over time, the lower right hand side quadrant and might be considered a threat; 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.



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



Consider, for example, Trempealeau County were we explore both the sectors included in retail (Figure 2, Table 5) as well as services (Figure 3, Table 6). For retail, there are three sectors that are identified as “strengths and growing”: motor vehicle and parts dealers (Pull Factor 2022 1.311 and a change in Pull Factor 2019 to 2022 of 0.254 and potential sales of \$67.1 million), building material, garden equipment and supplies ((Pull Factor 2022 1.264 and a change in Pull Factor 2019 to 2022 of 0.520 and potential sales of \$38.5 million) and nonstore retailers (generally associated with internet based retailers) (Pull Factor 2022 1.523 and a change in Pull Factor 2019 to 2022 of 0.305 and potential sales of \$44.6 million). As potential retail clusters, these particular sectors warrant additional attention. There are two sectors that could be considered as potential opportunities: electronics and appliance stores and general merchandise stores. Both have Pull Factors less than one in 2022 but from 2019 there is relative growth when compared to the overall Wisconsin average. There are no retail sectors that fall into the broad strength but declining (which could be interpreted as a threat), and several that are in the weakness and declining.

For the latter category, weakness and declining, great care must be taken in terms of the market potential. Specifically, the economics underpinning market population thresholds discussed in detail in an appendix to this report suggests that Trempealeau County may be too small to support particular types of businesses. This may explain why retail sectors such as furniture and home furnishing stores appear to be “underperforming” in Trempealeau County.

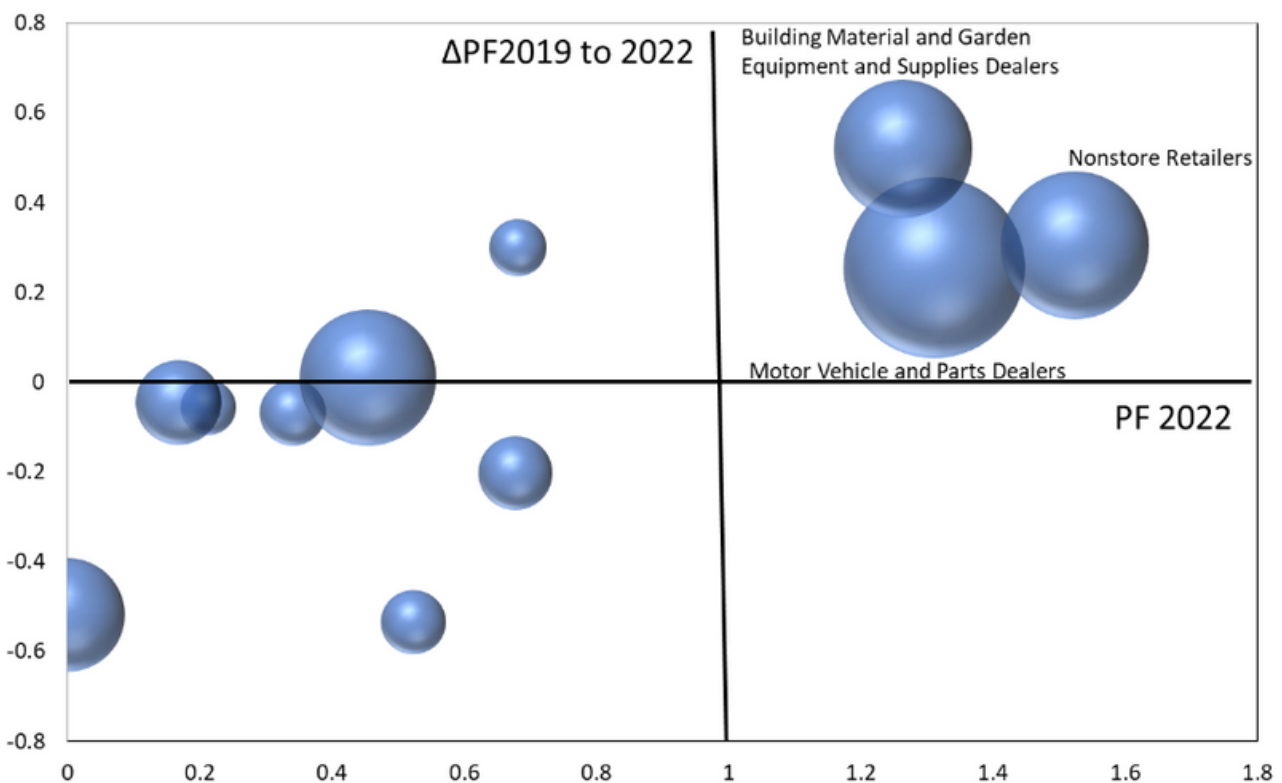
For the nine sectors making up the broad category of services, there are five sectors that are performing well (i.e., Pull Factor above one) and growing (Pull Factor increasing between 2019 and 2022). The largest of these sectors in food services and drinking places (Pull Factor 2022 1.576 and a change in Pull Factor 2019 to 2022 of 0.876 and potential sales of \$47.2 million) followed by telecommunications (Pull Factor 2022 1.789 and a change in Pull Factor 2019 to 2022 of 0.346 and potential sales of \$14.3 million), which increasingly is driven by broadband internet services, along with professional, scientific and technical services (Pull Factor 2022 1.689 and a change in Pull Factor 2019 to 2022 of 0.346 and


potential sales of \$11.9 million). This latter service is of particular interest because businesses within this category tend to be located in more urban areas.

There are two additional service sectors that could warrant additional consideration. Data processing, hosting and related services has a relatively strong Pull Factor (0.818) and modestly increasing (change in Pull Factor of 0.222). While the potential sales is relatively modest at \$2.1 million, much like professional, scientific and technical services, data processing and hosting related businesses tend to also geographically cluster in more urban areas. Repair and maintenance, a type of service that is generally available in most communities, could be classified as a weakness for Trempealeau County. In 2022 the Pull Factor was 0.932 which is reasonably close to one, but note that it declined from 2019 to 2022 by 0.571. This reveals that in 2019 the Pull Factor was above one (a potential strength) and is now below one (potential weakness). This particular sector might warrant further consideration.



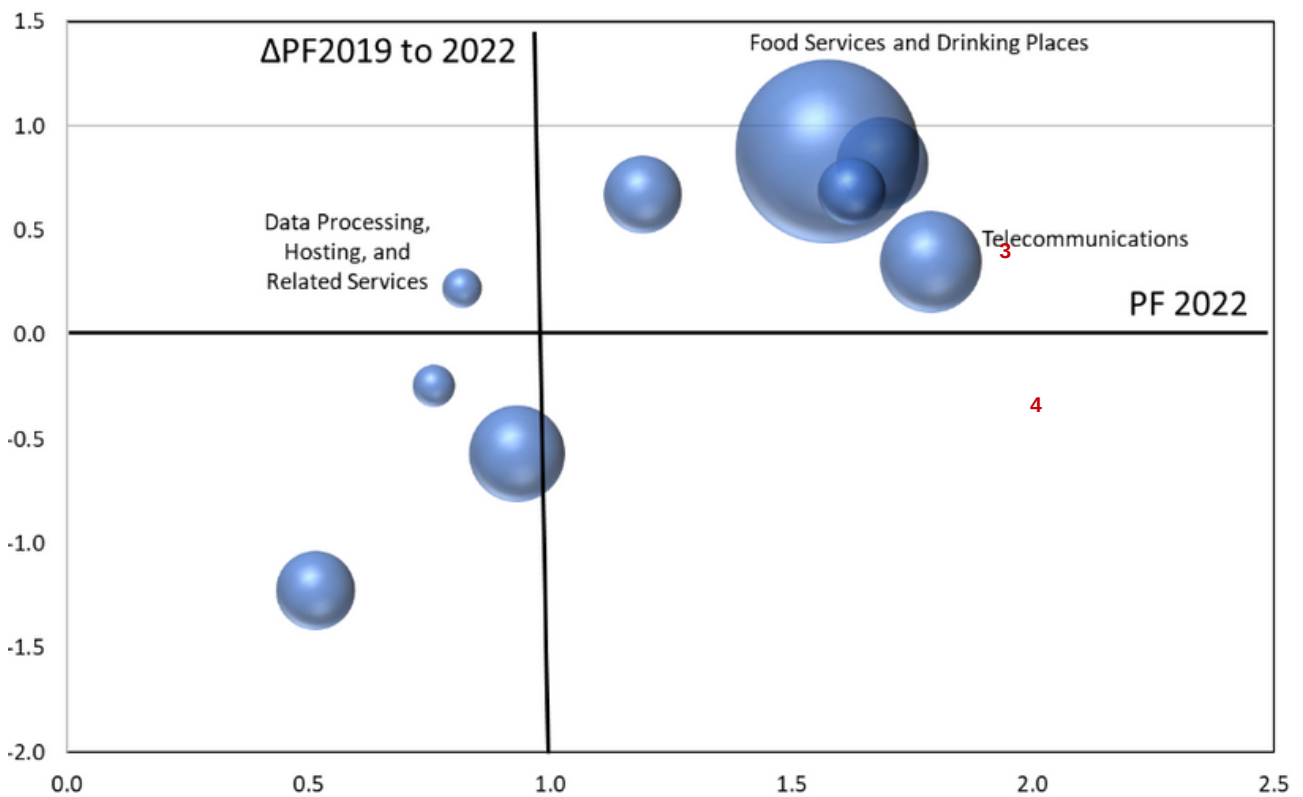
Figure 2: Retail Cluster Analysis for Trempealeau County




 Table 5: Trempealeau Retail Cluster

Potential Cluster	Pull Factor 2022	Change in Pull Factor 2019-2022	Potential Sales 2022
Potential Cluster			
454 - Nonstore Retailers	1.523	0.305	\$ 44,628,814
441 - Motor Vehicle and Parts Dealers	1.311	0.254	\$ 67,158,210
444 - Building Material and Garden Equipment and Supplies Dealers	1.264	0.520	\$ 38,554,967
Potential Opportunities			
443 - Electronics and Appliance Stores	0.681	0.299	\$ 6,547,511
452 - General Merchandise Stores	0.455	0.009	\$ 37,534,728
Weakness and Declining			
448 - Clothing and Clothing Accessories Stores	0.168	-0.046	\$ 14,747,577
446 - Health and Personal Care Stores	0.213	-0.056	\$ 6,033,798
451 - Sporting Goods, Hobby, Book, and Music Stores	0.341	-0.068	\$ 8,939,571
453 - Miscellaneous Store Retailers	0.678	-0.203	\$ 11,206,516
445 - Food and Beverage Stores	0.000	-0.519	\$ 26,670,500
442 - Furniture and Home Furnishings Stores	0.523	-0.536	\$ 8,316,133

 Figure 3: Services Cluster Analysis for Trempealeau County



 Table 6: Trempealeau Services Cluster

	Pull Factor 2022	Change in Pull Factor 2019- 2022	Potential Sales 2022
Potential Cluster			
517 - Telecommunications	1.789	0.346	\$ 14,283,367
541 - Professional, Scientific, and Technical Services	1.689	0.821	\$ 11,866,909
812 - Personal and Laundry Services	1.625	0.687	\$ 6,317,304
722 - Food Services and Drinking Places	1.576	0.876	\$ 47,177,564
561 - Administrative and Support Services	1.193	0.670	\$ 8,303,303
Potential Opportunities			
518 - Data Processing, Hosting, and Related Services	0.818	0.222	\$ 2,139,614
Weakness and Declining			
532 - Rental and Leasing Services	0.514	-1.226	\$ 8,603,746
811 - Repair and Maintenance	0.932	-0.571	\$ 12,823,354
522 - Credit Intermediation and Related Activities	0.760	-0.246	\$ 2,385,779

While this type of cluster analysis, whether one is using employment by industry or taxable sales as done in this study, can provide useful insights into local retail and service markets, care must be taken not to place too much emphasis on this analysis. This type of analysis should be viewed as providing insights into local markets and help point more refined analysis in a particular direction. Local knowledge about the retail and service markets is vital to fully appreciate the insights gained by the Trade Area Analysis provided in this report.



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-Extension³ as well as the collection of resources at the USDA National Rural Resource Library and the references therein.⁴

3 | <http://www.uwex.edu/ces/cced/publicat/letstalk.html>

4 | <http://www.nal.usda.gov/ric/ricpubs/downtown.html>

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.
 - Help develop an online presence for each new or existing business including e-retailing and online marketing including the use of social media.
 - Coordinated advertising can build on economies of size and scope.
 - Coordinate business hours.
 - Sponsor downtown activities such as sidewalk sales or art fairs.
 - Organize farmers markets to attract customers to the downtown.
 - Providing 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.

- 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 Wisconsin Counties: Retail Sectors 2022

	441 - Motor Vehicle and Parts Dealers	442 - Furniture and Home Furnishings Stores	443 - Electronics and Appliance Stores	444 - Building Material and Garden Equipment and Supplies Dealers	445 - Food and Beverage Stores	446 - Health and Personal Care Stores	447 - Gasoline Stations	448 - Clothing and Clothing Accessories Stores	451 - Sporting Goods, Hobby, Book, and Music Stores	452 - General Merchandise Stores	453 - Miscellaneous Store Retailers	454 - Nonstore Retailers
Adams	1.311	0.523	0.681	1.264	0.000	0.213	0.000	0.168	0.341	0.455	0.678	1.523
Ashland	1.005	0.861	0.531	1.244	0.878	1.339	0.000	0.484	0.625	3.328	0.980	1.120
Barron	1.293	0.942	1.006	1.951	0.653	0.872	0.000	0.731	1.535	1.860	1.679	1.060
Bayfield	0.743	0.592	0.353	0.908	0.861	0.257	0.000	0.295	1.633	0.278	0.803	1.173
Brown	1.149	1.194	1.296	1.087	1.243	1.081	1.146	1.286	1.359	1.208	1.442	1.032
Buffalo	0.821	0.309	0.000	0.769	0.000	0.272	0.000	0.237	0.287	0.246	0.694	1.109
Burnett	0.856	0.515	0.515	1.708	0.000	0.321	0.000	0.190	0.769	0.748	0.911	1.258
Calumet	1.082	0.558	0.554	0.937	0.500	0.495	0.000	0.860	4.457	1.351	0.718	1.010
Chippewa	1.533	0.920	0.581	0.825	0.504	0.593	0.000	0.405	4.230	1.527	0.742	1.135
Clark	1.104	0.543	0.408	0.852	0.389	0.341	0.000	0.188	0.255	0.270	1.518	0.876
Columbia	1.006	0.762	0.452	0.598	0.539	0.769	2.532	0.488	0.891	0.789	0.826	1.162
Crawford	1.122	0.394	1.064	0.859	0.585	1.105	0.000	0.385	7.510	2.981	0.728	1.183
Dane	0.738	1.153	1.126	0.764	1.101	1.073	0.902	1.072	1.201	0.720	0.962	0.908
Dodge	1.197	0.575	0.898	0.680	0.537	0.693	1.880	0.575	0.680	1.104	0.676	1.033
Door	1.400	1.840	0.785	1.189	1.437	0.811	1.297	2.014	0.884	0.799	2.046	1.141
Douglas	0.740	0.589	0.813	1.975	0.801	0.939	0.000	0.348	1.097	1.258	1.130	1.079
Dunn	1.292	0.576	0.865	0.440	0.615	0.730	0.000	0.385	0.632	1.536	0.895	1.139
Eau Claire	0.997	1.013	1.960	1.589	1.575	1.130	1.716	1.594	1.085	1.273	1.754	0.985
Florence	0.663	0.000	0.000	0.450	0.000	0.161	0.000	0.117	0.206	0.226	0.663	0.874
Fond du Lac	1.168	0.744	1.119	0.855	0.944	1.019	1.617	0.622	0.568	0.863	0.811	0.992
Forest	0.904	0.599	0.000	1.410	0.000	0.240	0.000	0.294	0.448	0.398	0.864	1.117
Grant	0.983	0.602	0.640	1.407	0.278	0.655	1.713	0.482	0.431	1.213	0.721	1.021
Green	0.980	1.103	0.763	0.474	0.408	0.779	0.000	0.409	0.457	1.284	1.226	0.988
Green Lake	1.643	0.949	0.605	1.274	0.000	0.299	0.000	0.286	0.328	1.585	1.908	1.297
Iowa	0.972	1.064	1.546	0.882	0.000	0.715	0.000	0.258	0.443	1.418	0.984	1.230
Iron	0.931	0.616	0.000	0.868	0.000	0.211	0.000	0.278	1.049	0.218	0.769	1.023
Jackson	0.991	0.842	0.597	0.714	0.367	0.200	0.000	0.149	0.175	1.817	0.615	1.090
Jefferson	1.020	0.747	0.562	1.082	0.522	1.159	1.558	1.414	0.460	1.003	0.677	1.094
Juneau	1.472	0.669	0.948	0.688	0.903	1.040	3.959	0.267	0.605	0.453	0.669	1.371
Kenosha	0.813	0.910	1.098	0.732	1.259	1.353	1.510	2.048	1.413	0.996	0.906	1.061
Kewaunee	1.331	0.645	0.428	0.512	0.000	0.374	0.000	0.310	0.385	0.232	0.303	0.969
La Crosse	1.031	0.854	1.650	1.431	1.379	1.062	0.000	1.371	1.559	1.411	1.388	0.934
Lafayette	0.896	0.574	0.524	0.966	0.000	0.291	0.000	0.209	0.235	0.316	0.502	1.012
Langlade	1.621	0.872	0.496	2.320	0.000	1.211	1.978	0.670	0.729	2.443	0.813	0.946



Pull Factors Wisconsin Counties: Retail Sectors 2022

	441 - Motor Vehicle and Parts Dealers	442 - Furniture and Home Furnishings Stores	443 - Electronics and Appliance Stores	444 - Building Material and Garden Equipment and Supplies Dealers	445 - Food and Beverage Stores	446 - Health and Personal Care Stores	447 - Gasoline Stations	448 - Clothing and Clothing Accessories Stores	451 - Sporting Goods, Hobby, Book, and Music Stores	452 - General Merchandise Stores	453 - Miscellaneous Store Retailers	454 - Nonstore Retailers
Lincoln	1.434	1.006	0.680	0.710	0.635	0.776	2.139	0.283	0.648	1.161	0.785	1.024
Marathon	1.181	1.047	1.155	1.444	0.978	0.917	1.455	0.877	1.218	1.042	1.171	0.901
Marinette	1.362	0.633	0.669	1.597	0.910	0.711	2.515	0.829	0.723	1.444	0.884	1.185
Marquette	1.237	0.415	0.288	0.422	0.000	0.345	0.000	0.192	1.314	0.398	0.527	1.535
Menominee	0.426	0.000	0.000	0.000	0.000	0.111	0.000	0.207	0.140	0.000	0.074	0.564
Milwaukee	0.805	1.161	0.986	0.617	1.310	1.347	0.752	1.428	0.713	0.687	0.871	0.930
Monroe	1.161	0.812	0.805	0.891	0.460	0.597	2.810	0.304	0.392	2.053	0.851	1.072
Oconto	1.313	0.694	0.404	0.593	0.462	0.252	1.660	0.167	0.363	0.278	0.408	1.126
Oneida	1.413	1.651	0.817	3.233	1.029	1.156	1.591	0.872	2.001	2.645	1.608	1.102
Outagamie	1.273	1.186	1.516	1.400	1.297	1.338	1.305	1.694	1.183	1.158	1.203	1.011
Ozaukee	0.720	0.892	0.547	0.549	0.962	0.751	0.594	0.801	0.610	0.721	0.695	0.780
Pepin	1.029	0.449	0.325	0.838	0.000	0.364	0.000	0.249	1.087	0.264	0.904	0.976
Pierce	0.690	0.597	0.488	0.634	0.593	0.325	0.981	0.278	0.513	0.184	0.546	1.004
Polk	0.960	0.886	0.651	2.216	0.748	0.418	1.474	0.241	0.595	1.144	0.799	1.083
Portage	1.025	1.010	1.592	1.447	1.124	0.817	0.000	0.842	1.086	1.299	1.207	1.010
Price	1.038	0.713	0.581	1.720	0.000	0.300	0.000	0.142	0.537	0.353	0.827	1.105
Richland	1.286	0.487	0.740	0.809	0.000	0.265	0.000	0.345	0.175	2.120	0.957	0.997
Rock	1.271	0.890	1.240	1.193	1.247	1.101	1.555	0.813	0.895	1.205	1.484	1.062
Rusk	1.164	0.354	0.000	1.143	0.000	0.253	0.000	0.134	0.238	1.688	0.474	0.933
Sauk	1.129	0.907	1.114	1.670	0.928	1.743	1.972	2.070	0.969	1.749	1.228	1.197
Sawyer	1.944	2.125	1.583	2.426	1.011	0.933	0.000	0.920	1.768	3.139	1.607	1.241
Shawano	1.379	0.699	0.690	1.097	0.605	0.796	1.299	0.371	0.555	1.382	0.766	1.001
Sheboygan	1.005	0.843	1.072	0.873	1.018	0.857	1.227	0.564	0.461	1.021	0.786	0.971
St. Croix	0.799	0.853	0.575	1.599	1.056	0.677	0.000	0.349	0.490	0.831	1.102	1.007
Taylor	1.261	0.369	0.874	1.490	0.000	0.283	0.000	0.459	0.574	1.565	0.461	0.909
Trempealeau	1.047	0.368	0.350	0.690	0.624	0.339	0.000	0.303	0.467	0.382	0.736	1.347
Vernon	1.156	0.952	1.032	0.927	0.608	0.741	0.000	0.339	0.549	1.088	0.937	0.903
Vilas	1.949	2.136	1.326	1.777	1.064	1.071	1.859	0.559	1.817	0.229	1.178	1.178
Walworth	1.079	1.579	1.299	1.329	0.983	0.916	1.660	0.810	0.598	1.163	1.027	1.130
Washburn	1.596	1.067	0.761	1.848	0.911	0.536	0.000	0.345	1.041	0.336	0.937	1.189
Washington	0.980	0.871	0.769	1.128	0.797	0.867	1.122	0.710	1.132	0.982	0.785	1.012
Waupaca	1.313	0.670	0.739	0.720	0.772	1.232	2.020	0.304	0.313	1.001	0.685	1.100
Waushara	1.300	0.558	1.055	0.563	0.649	0.402	0.000	0.214	0.228	0.422	0.918	1.112
Wood	1.081	1.277	0.459	0.889	1.169	0.863	1.747	0.494	0.510	1.732	1.014	0.969



Surplus-Leakage Wisconsin Counties: Retail Sectors 2022

	441 - Motor Vehicle and Parts Dealers	442 - Furniture and Home Furnishings Stores	443 - Electronics and Appliances Stores	444 - Building Material and Garden Equipment and Supplies Dealers	445 - Food and Beverage Stores	446 - Health and Personal Care Stores	447 - Gasoline Stations	448 - Clothing and Accessories Stores	451 - Sporting Goods, Hobby, Book, and Music Stores	452 - General Merchandise Stores	453 - Miscellaneous Retailers	454 - Nonstore Retailers
Adams	13,196,433	2,504,230	1,318,749	6,429,957	16,847,409	3,000,261	7,201,743	7,750,510	3,722,295	12,933,379	2,281,944	14,757,875
Ashland	150,071	555,424	1,472,129	4,519,337	1,559,452	981,010	5,471,132	3,652,742	1,610,812	41,941,171	107,860	2,574,753
Barron	34,499,788	842,619	67,519	64,250,452	16,227,821	1,351,495	19,987,405	6,942,038	8,386,237	56,564,788	13,331,178	4,702,576
Bayfield	9,991,502	1,958,566	2,448,754	2,052,338	2,139,956	2,590,765	6,589,037	6,004,754	3,270,555	15,662,248	1,273,517	4,466,974
Brown	107,781,726	17,438,586	20,883,783	35,985,564	69,930,999	5,298,587	17,927,917	45,443,327	34,601,066	84,385,825	53,393,923	15,162,963
Buffalo	5,406,915	2,584,156	2,945,286	4,003,929	11,997,270	1,976,189	5,128,460	5,062,357	2,868,437	12,727,046	1,542,119	2,182,420
Burnett	5,147,483	2,148,958	1,690,928	14,550,182	14,207,827	2,183,128	6,073,404	6,365,416	1,097,894	5,038,289	532,142	6,129,095
Calumet	11,492,646	7,638,525	6,074,092	5,049,583	27,712,319	6,337,588	23,696,231	4,301,971	64,239,522	27,363,622	6,569,481	946,717
Chippewa	83,204,020	1,536,712	6,379,486	15,631,560	30,738,494	5,697,314	26,481,603	20,389,204	67,069,503	45,975,862	6,711,780	13,995,283
Clark	7,804,436	4,254,912	4,341,290	6,383,423	18,259,440	4,451,883	12,768,153	13,406,137	7,460,294	30,707,017	6,503,950	6,180,724
Columbia	868,714	4,512,447	8,184,550	35,350,910	28,028,930	3,183,353	39,836,951	17,221,763	2,213,597	18,102,125	4,443,584	16,483,014
Crawford	4,214,049	2,586,273	213,976	2,790,231	5,671,666	324,619	5,846,731	4,648,184	29,844,794	38,135,689	1,562,567	4,197,044
Dane	484,596,075	35,114,313	22,710,705	250,896,484	74,057,603	12,131,186	30,689,962	29,103,786	49,390,264	289,478,006	11,678,891	113,009,155
Dodge	40,197,692	10,758,228	2,034,865	37,629,300	37,617,711	5,642,853	30,555,009	19,081,360	8,724,066	11,865,307	11,047,305	4,535,168
Door	36,898,492	9,578,905	1,929,915	9,980,562	15,993,440	1,561,142	4,643,373	20,514,594	1,424,186	10,376,059	16,085,254	8,660,018
Douglas	25,478,607	4,987,987	1,792,008	54,936,152	7,751,289	541,866	16,653,188	14,053,389	1,260,873	14,127,616	2,129,672	5,133,482
Dunn	28,210,959	5,067,052	1,269,494	31,017,631	14,748,104	2,341,785	16,381,017	13,028,126	4,728,107	28,901,832	1,698,559	8,926,735
Eau Claire	669,757	428,845	25,022,796	90,410,317	61,053,939	3,122,371	32,516,747	34,895,286	3,039,830	40,801,275	33,642,984	2,738,027
Florence	4,266,277	1,567,736	1,234,320	3,997,522	5,027,854	954,675	2,149,251	2,454,367	1,338,273	5,474,536	711,056	1,064,150
Fond du Lac	43,975,812	8,310,400	3,038,335	21,799,440	5,785,923	439,566	27,501,449	21,768,599	15,084,112	20,172,060	8,258,071	1,427,174
Forest	1,827,186	946,851	1,860,608	4,493,670	7,578,962	1,302,595	3,239,771	2,957,438	1,403,256	6,423,012	432,127	1,485,314
Grant	1,944,201	5,707,946	4,064,092	27,076,564	33,255,529	3,591,905	14,034,364	13,174,929	8,778,521	13,788,268	5,404,443	1,651,827
Green	1,937,445	1,258,542	2,268,865	29,707,347	23,122,303	1,949,301	16,689,816	12,757,765	7,104,639	15,605,451	3,715,226	798,894
Green Lake	26,435,499	261,849	1,582,192	6,461,753	16,332,073	2,588,509	6,981,453	6,448,331	3,679,714	13,444,498	6,230,312	8,117,584
Iowa	1,659,874	469,912	3,174,842	4,047,939	23,694,382	1,529,843	10,128,611	9,725,470	4,426,299	13,934,105	158,065	9,112,075
Iron	990,456	686,602	1,406,219	1,094,560	5,728,065	1,022,992	2,448,569	2,286,288	94,253	6,304,904	556,384	216,320
Jackson	398,480	913,159	1,828,344	7,655,740	11,701,358	3,345,403	7,905,628	8,701,405	5,114,244	21,273,451	2,993,317	2,796,088
Jefferson	4,192,241	6,499,082	8,852,393	9,733,021	39,361,725	2,971,621	19,633,579	18,881,476	14,920,411	320,384	11,184,541	12,929,033
Juneau	25,142,735	2,185,683	270,043	9,553,243	2,059,914	192,927	26,776,291	8,584,059	2,806,248	16,288,498	2,941,785	13,130,261
Kenosha	82,229,016	4,910,861	4,193,977	67,748,168	45,308,723	13,953,900	38,142,324	101,327,538	24,205,354	910,886	6,879,591	17,707,636
Kewaunee	16,612,065	2,209,663	2,801,324	14,076,034	19,947,828	2,826,158	8,527,076	7,612,096	4,109,378	21,564,652	5,843,010	1,034,813
La Crosse	9,784,396	5,678,428	19,935,939	77,874,667	47,390,766	1,755,766	53,441,932	25,676,057	23,440,880	72,251,498	20,367,649	13,890,579
Lafayette	3,851,824	1,954,338	1,719,564	717,079	14,701,497	2,359,395	6,284,433	6,433,246	3,770,394	14,142,993	3,077,635	300,526
Langlade	26,741,067	681,207	2,114,913	32,607,926	17,087,695	816,911	7,147,243	3,115,236	1,550,795	34,695,410	1,345,626	1,541,730



Surplus-Leakage Wisconsin Counties: Retail Sectors 2022

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Lincoln	27,780,973	45,810	1,999,349	10,665,300	9,301,088	1,292,180	12,392,021	10,090,359	3,003,921	5,755,111	2,303,236	1,005,402
Marathon	65,077,485	2,074,443	5,445,746	91,768,074	3,138,829	2,667,525	27,784,862	9,681,556	10,436,939	8,477,897	10,243,338	23,682,171
Marquette	33,536,136	4,213,963	2,992,192	31,780,838	3,309,427	2,408,854	23,938,645	3,481,238	3,417,710	23,013,251	1,794,283	11,372,703
Marquette	7,545,511	2,306,001	2,211,435	10,564,168	12,649,146	1,874,202	5,407,116	5,652,173	1,332,064	10,709,152	2,513,066	11,332,741
Menominee	4,457,387	962,181	757,551	4,460,832	3,085,792	620,503	1,319,080	1,353,676	889,094	4,342,790	1,201,181	2,249,226
Milwaukee	446,393,640	45,505,899	3,139,038	502,477,027	281,302,007	71,159,676	96,162,160	214,943,514	87,148,722	399,150,547	49,258,848	105,695,284
Monroe	15,980,410	2,314,001	1,893,506	6,230,035	21,305,491	3,596,322	30,523,159	15,186,322	8,041,557	58,465,466	2,468,449	4,763,420
Oconto	28,481,048	3,451,842	5,291,777	21,291,021	19,456,752	6,117,063	10,198,740	16,650,106	7,717,884	36,767,381	9,001,694	7,608,486
Oneida	38,970,264	7,598,369	1,681,102	120,914,451	1,075,465	1,318,387	9,470,405	2,642,672	12,571,390	86,711,628	9,561,332	6,421,003
Outagamie	138,273,099	11,694,648	25,494,570	116,192,099	59,688,379	15,374,122	26,201,679	77,216,109	12,314,879	44,867,030	17,162,214	3,592,966
Ozaukee	108,888,370	5,196,485	17,160,541	100,634,608	5,882,396	8,688,805	26,815,084	16,985,921	20,158,057	60,636,591	19,804,603	56,765,624
Pepin	534,191	1,264,315	1,220,414	1,722,453	7,364,840	1,060,270	3,148,240	3,059,707	215,420	7,627,832	295,871	292,251
Pierce	32,250,913	5,186,614	5,193,883	21,839,951	16,817,959	6,304,721	337,559	16,505,490	6,741,970	47,446,307	7,879,792	272,678
Polk	4,240,092	1,494,289	3,611,095	74,105,908	10,609,284	5,546,454	8,548,041	17,685,987	5,716,780	8,569,639	3,565,019	5,883,340
Portage	4,325,025	199,745	9,803,895	43,566,750	8,391,112	2,784,434	28,819,332	5,895,461	1,935,446	28,381,842	5,851,102	1,118,530
Price	1,196,383	1,108,929	1,277,412	12,917,822	12,412,072	1,965,319	5,305,775	5,886,941	1,926,121	11,296,539	899,807	2,179,021
Richland	10,810,278	2,403,832	957,562	4,156,599	15,017,017	2,498,699	6,419,307	5,438,416	4,153,228	23,668,571	268,421	67,265
Rock	102,266,718	5,145,827	8,820,767	41,678,775	36,915,772	3,428,393	35,532,668	15,473,306	5,257,632	43,254,168	30,457,238	15,502,347
Rusk	5,059,196	2,472,703	3,012,893	2,545,575	12,272,657	2,075,301	5,246,179	5,879,875	3,135,058	11,888,496	2,710,353	1,381,141
Sauk	22,158,126	1,983,405	1,908,642	66,232,631	4,948,778	11,501,146	28,418,926	40,481,569	719,589	72,152,062	6,566,053	22,519,957
Sawyer	38,201,772	5,639,527	2,298,825	33,128,219	179,757	242,561	6,871,474	711,454	4,139,162	48,398,264	4,102,620	6,473,755
Shawano	33,722,857	3,312,548	2,692,207	4,938,664	13,970,583	1,633,132	4,519,809	12,290,657	5,266,751	19,022,289	3,468,699	40,420
Sheboygan	1,634,593	5,988,287	2,162,450	22,436,435	2,140,115	3,941,547	11,841,224	29,422,751	22,034,248	3,623,856	10,984,710	5,990,061
St. Croix	55,678,218	5,043,445	11,491,360	95,451,621	6,145,468	8,039,232	47,088,263	39,666,463	18,812,997	26,257,070	4,706,943	1,360,777
Taylor	11,336,333	3,388,977	531,405	12,210,418	17,230,904	2,796,117	7,365,675	5,152,895	2,462,617	13,710,849	3,902,935	2,617,054
Trempealeau	3,139,369	5,254,592	4,256,937	11,957,080	10,032,156	3,988,162	11,400,809	10,279,543	4,766,723	23,182,261	2,962,038	15,482,867
Vernon	10,315,836	393,831	208,455	2,778,879	10,270,541	1,535,058	11,206,526	9,576,381	3,960,826	3,251,297	690,722	4,256,970
Vilas	56,328,008	8,353,073	1,889,875	26,500,113	1,520,430	376,149	8,662,405	5,753,438	6,456,271	25,581,435	1,768,341	7,013,362
Walworth	22,053,516	19,986,569	8,123,848	52,695,155	1,896,073	2,105,140	31,240,312	11,645,521	14,922,081	25,320,094	1,238,434	24,093,664
Washburn	23,485,508	326,575	918,866	19,193,861	1,392,378	1,643,720	6,690,554	5,665,042	217,422	14,636,880	416,366	4,949,023
Washington	8,183,471	6,619,387	9,326,928	30,504,536	33,437,857	4,968,135	8,576,321	26,403,696	7,264,633	4,187,753	14,844,418	3,205,817
Waupaca	37,431,774	4,876,270	3,039,043	19,228,139	10,808,217	2,490,335	20,689,629	18,263,444	10,930,837	69,719	6,289,488	7,945,492
Waushara	15,482,108	2,831,004	276,514	12,977,357	7,204,225	2,778,352	8,772,609	8,924,663	5,308,730	16,699,506	704,674	3,850,825
Wood	13,957,832	5,948,864	9,134,540	11,013,289	11,613,266	2,134,462	21,986,254	19,250,918	11,297,650	70,850,168	406,316	3,607,083



Pull Factors Wisconsin Counties: Service Sectors 2022

	517 - Telecommunications	518 - Data Processing, Hosting, and Related Services	519 - Other Information Services	522 - Credit Intermediation and Related Activities	524 - Insurance Carriers and Related Activities	531 - Real Estate	532 - Rental and Leasing Services	541 - Professional, Scientific, and Technical Services	551 - Management of Companies and Enterprises
Adams	1.789	0.818	0.000	0.760	0.000	0.000	0.514	1.689	0.000
Ashland	0.897	0.431	0.000	0.784	0.000	0.000	1.002	1.083	0.000
Barron	1.140	0.445	0.000	0.675	0.000	0.000	0.862	1.391	0.000
Bayfield	1.455	0.446	0.000	0.534	0.000	0.000	0.471	0.964	0.000
Brown	1.010	1.285	1.424	1.025	0.808	0.990	1.017	1.201	0.438
Buffalo	0.998	0.438	0.000	0.594	0.000	0.000	0.580	0.528	0.000
Burnett	1.310	0.000	0.000	0.375	0.000	0.000	0.609	0.772	0.000
Calumet	0.886	1.819	0.000	1.063	0.000	0.000	0.733	0.692	0.867
Chippewa	0.858	0.978	0.000	1.030	0.000	0.000	1.115	1.040	0.870
Clark	0.799	0.353	0.000	0.308	0.000	0.000	0.475	0.459	0.000
Columbia	1.199	0.493	0.000	0.467	0.000	0.898	0.924	0.438	0.989
Crawford	2.051	0.482	0.000	0.507	0.000	0.000	0.330	1.073	0.000
Dane	0.932	1.514	1.264	0.931	0.757	1.626	0.934	1.487	0.684
Dodge	1.032	0.411	1.579	1.083	0.000	0.580	1.218	0.829	0.503
Door	1.120	0.442	0.000	1.089	0.000	9.536	0.729	1.764	0.000
Douglas	1.069	0.759	0.000	1.108	0.000	0.000	1.538	0.922	0.000
Dunn	1.024	0.436	0.000	0.683	0.000	0.000	0.783	1.244	2.058
Eau Claire	0.684	0.702	0.000	0.780	0.236	0.370	1.157	0.765	0.000
Florence	0.783	0.000	0.000	0.469	0.000	0.000	0.274	0.354	0.000
Fond du Lac	0.913	0.561	1.250	1.068	5.766	0.631	0.918	0.725	0.414
Forest	1.203	0.000	0.000	0.612	0.000	0.000	0.460	0.651	0.000
Grant	1.226	0.338	0.000	0.540	0.000	0.000	0.729	0.540	0.000
Green	1.340	0.856	0.000	0.525	0.000	0.000	0.605	0.613	0.000
Green Lake	1.041	0.590	0.000	0.773	0.000	0.000	0.421	0.669	0.000
Iowa	1.057	0.603	0.000	0.672	0.000	0.000	0.907	0.785	0.000
Iron	0.938	0.000	0.000	0.751	0.000	0.000	0.482	2.443	0.000
Jackson	1.117	0.324	0.000	0.568	0.000	0.000	0.542	0.494	0.000
Jefferson	1.055	0.548	1.356	0.631	0.000	1.014	0.802	0.737	0.000
Juneau	1.350	0.307	0.000	0.554	0.000	0.000	0.609	0.637	0.000
Kenosha	0.892	0.792	2.221	1.365	0.887	0.684	0.957	0.716	1.157
Kewaunee	0.967	0.407	0.000	0.653	0.000	0.000	0.353	0.366	0.000
La Crosse	1.045	0.952	1.376	1.014	0.482	0.938	1.131	1.082	1.422
Lafayette	1.192	0.357	0.000	0.688	0.000	0.000	0.346	0.316	0.000
Langlade	1.179	0.644	0.000	1.080	0.000	0.000	0.575	0.582	0.000



Pull Factors Wisconsin Counties: Service Sectors 2022

	561 - Administrative and Support Services	611 - Educational Services	621 - Ambulatory Health Care Services	711 - Performing Arts, Spectator Sports, and Related Industries	713 - Amusement, Gambling, and Recreation Industries	721 - Accommodation	722 - Food Services and Drinking Places	811 - Repair and Maintenance	812 - Personal and Laundry Services
Adams	1.193	0.000	0.000	0.000	0.000	0.000	1.576	0.932	1.625
Ashland	0.832	0.000	0.000	0.000	0.000	0.000	1.161	1.198	1.220
Barron	0.682	0.000	0.707	0.000	0.898	0.915	0.929	1.110	0.799
Bayfield	0.902	0.000	0.000	0.000	3.883	3.693	0.740	0.730	0.921
Brown	0.995	1.022	1.413	6.053	1.270	0.882	1.106	0.920	0.937
Buffalo	0.617	0.000	0.000	0.000	0.000	0.000	0.671	1.148	1.290
Burnett	0.545	0.000	0.000	0.000	0.000	0.000	0.934	1.133	0.701
Calumet	0.604	0.147	0.809	0.000	0.000	0.000	0.686	0.633	0.690
Chippewa	1.839	0.000	1.949	0.000	0.752	0.634	0.849	1.278	1.353
Clark	0.904	0.000	0.000	0.000	0.000	0.000	0.383	1.383	0.723
Columbia	0.656	0.000	0.641	0.000	2.215	1.081	0.822	1.185	0.795
Crawford	0.559	0.000	0.000	0.000	0.000	1.882	1.232	0.931	0.490
Dane	1.230	3.674	1.671	0.510	0.606	0.920	0.940	0.690	0.882
Dodge	0.668	0.209	2.815	0.000	0.839	0.000	0.558	1.318	1.005
Door	2.251	0.000	0.644	0.000	2.542	7.439	2.036	0.807	1.664
Douglas	0.679	0.000	0.727	0.000	0.000	1.009	1.210	1.861	0.951
Dunn	0.600	0.000	0.000	0.000	0.000	0.000	0.826	1.160	1.159
Eau Claire	1.165	0.269	1.734	0.000	1.013	0.962	1.173	1.145	1.484
Florence	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.482
Fond du Lac	0.805	0.612	0.541	0.000	1.595	0.506	0.903	1.225	1.109
Forest	0.285	0.000	0.000	0.000	0.000	0.000	0.697	0.000	1.101
Grant	0.692	0.635	0.687	0.000	0.000	0.000	0.714	1.608	0.587
Green	0.553	0.000	0.000	0.000	0.000	0.000	0.669	1.804	0.713
Green Lake	1.616	0.000	0.000	0.000	0.000	0.000	0.596	0.804	1.203
Iowa	0.597	0.000	0.000	0.000	0.000	1.580	0.519	1.083	0.682
Iron	0.658	0.000	0.000	0.000	0.000	0.000	1.164	0.000	0.961
Jackson	0.657	0.000	0.000	0.000	0.000	0.000	0.834	1.056	0.807
Jefferson	0.813	0.310	0.650	0.000	0.722	0.377	0.757	1.236	0.889
Juneau	0.567	0.000	0.000	0.000	0.000	1.727	1.021	1.544	0.983
Kenosha	1.061	0.792	0.894	0.000	1.240	0.414	0.983	0.788	0.883
Kewaunee	0.287	0.000	0.000	0.000	0.000	0.000	0.471	1.160	0.813
La Crosse	1.140	1.508	0.980	0.000	1.564	1.224	1.228	1.168	1.062
Lafayette	0.315	0.000	0.000	0.000	0.000	0.000	0.466	2.200	0.957
Langlade	0.584	0.000	0.000	0.000	0.000	0.000	1.034	0.743	1.171



Pull Factors Wisconsin Counties: Service Sectors 2022

	517 - Telecommunications	518 - Data Processing, Hosting, and Related Services	519 - Other Information Services	522 - Credit Intermediation and Related Activities	524 - Insurance Carriers and Related Activities	531 - Real Estate	532 - Rental and Leasing Services	541 - Professional, Scientific, and Technical Services	551 - Management of Companies and Enterprises
Lincoln	0.990	0.442	0.000	0.678	0.000	0.000	0.638	0.857	0.000
Marathon	1.021	0.657	1.298	0.905	2.110	1.069	1.121	0.835	1.100
Marinette	1.232	0.553	0.000	0.939	0.000	0.000	0.744	0.543	0.000
Marquette	1.489	0.349	0.000	0.461	0.000	0.000	0.555	0.470	0.000
Menominee	0.749	0.000	0.000	0.000	0.000	0.000	0.000	0.163	0.000
Milwaukee	0.995	1.819	1.628	1.486	1.479	1.606	1.475	1.202	2.264
Monroe	1.183	0.375	0.000	0.633	0.000	0.000	0.972	0.831	0.000
Oconto	0.931	0.317	0.000	0.437	0.000	0.000	0.346	0.307	0.000
Oneida	1.131	0.400	0.000	1.429	0.000	0.000	1.083	0.936	0.000
Outagamie	0.934	0.699	0.957	1.006	0.901	0.816	1.318	1.102	1.396
Ozaukee	0.556	0.868	0.865	1.217	0.000	0.282	0.481	0.586	1.712
Pepin	0.696	0.000	0.000	0.438	0.000	0.000	0.275	0.824	0.000
Pierce	0.963	0.458	0.000	0.761	0.000	0.000	0.648	0.799	0.000
Polk	0.982	0.444	0.000	0.558	0.000	0.000	0.464	0.639	0.000
Portage	1.213	0.795	0.000	0.982	17.974	0.778	1.229	1.265	0.000
Price	1.004	0.255	0.000	0.708	0.000	0.000	0.331	0.665	0.000
Richland	1.264	0.271	0.000	0.360	0.000	0.000	1.990	0.413	0.000
Rock	1.200	0.818	1.393	0.982	0.694	0.845	0.960	0.975	0.358
Rusk	1.099	0.301	0.000	0.368	0.000	0.000	0.979	0.381	0.000
Sauk	1.099	0.586	0.000	0.644	0.000	1.532	0.761	1.027	1.322
Sawyer	0.927	0.997	0.000	0.585	0.000	0.000	0.743	1.596	0.000
Shawano	1.190	0.494	0.000	0.505	0.000	0.000	0.498	0.416	0.000
Sheboygan	0.956	0.633	1.833	0.826	1.466	0.858	1.346	0.843	2.948
St. Croix	1.089	0.431	0.970	0.734	0.651	0.677	0.751	0.507	0.784
Taylor	0.907	0.328	0.000	0.601	0.000	0.000	0.474	0.426	0.000
Trempealeau	1.462	0.714	0.000	0.785	0.000	0.000	0.506	0.822	0.000
Vernon	0.987	0.521	0.000	0.356	0.000	0.000	0.449	0.592	0.000
Vilas	1.122	0.311	0.000	0.662	0.000	0.000	0.927	1.949	0.000
Walworth	0.904	0.520	2.331	1.142	0.595	3.598	0.805	0.793	0.120
Washburn	1.047	0.360	0.000	0.476	0.000	0.000	0.585	1.498	0.000
Washington	0.907	0.816	0.899	1.145	0.702	0.675	0.748	0.714	2.002
Waupaca	0.975	0.359	0.000	0.614	0.000	0.000	0.538	0.455	0.000
Waushara	1.164	0.291	0.000	0.407	0.000	0.000	0.682	0.718	0.000
Wood	1.291	0.489	0.000	0.657	0.000	0.839	0.905	0.582	2.609



Pull Factors Wisconsin Counties: Service Sectors 2022

	561 - Administrative and Support Services	611 - Educational Services	621 - Ambulatory Health Care Services	711 - Performing Arts, Spectator Sports, and Related Industries	713 - Amusement, Gambling, and Recreation Industries	721 - Accommodation	722 - Food Services and Drinking Places	811 - Repair and Maintenance	812 - Personal and Laundry Services
Lincoln	0.445	0.000	0.745	0.000	0.000	0.000	0.889	2.848	1.201
Marathon	0.866	0.562	1.506	0.000	0.935	0.687	0.869	1.211	0.862
Marinette	0.763	0.000	0.686	0.000	1.475	0.989	0.974	1.110	2.213
Marquette	0.426	0.000	0.000	0.000	0.000	0.000	0.641	1.475	0.770
Menominee	0.313	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Milwaukee	1.001	1.190	1.068	3.402	0.870	0.907	1.234	0.742	1.119
Monroe	0.846	0.000	0.000	0.000	0.000	1.508	0.904	1.111	0.940
Oconto	0.773	0.000	0.000	0.000	0.985	0.000	0.593	0.493	0.564
Oneida	1.497	0.000	1.948	0.000	3.039	1.669	1.278	1.871	1.447
Outagamie	1.015	0.370	0.893	0.000	1.275	0.646	1.081	1.100	1.322
Ozaukee	1.080	0.355	0.610	0.000	0.926	0.332	0.582	0.687	0.706
Pepin	0.469	0.000	0.000	0.000	0.000	0.000	0.834	1.343	1.845
Pierce	0.420	0.000	0.948	0.000	0.000	0.000	0.633	0.391	0.927
Polk	0.629	0.000	1.332	0.000	0.000	0.000	0.790	1.297	0.714
Portage	0.806	1.426	0.733	0.000	0.000	0.758	1.077	0.877	1.023
Price	0.400	0.000	0.000	0.000	0.000	0.000	0.592	1.643	1.158
Richland	0.497	0.000	0.000	0.000	0.000	0.000	0.664	0.949	0.520
Rock	0.915	0.267	0.921	0.000	2.863	0.640	1.100	1.116	0.843
Rusk	0.897	0.000	0.000	0.000	0.000	0.000	0.567	1.336	1.050
Sauk	1.387	0.157	1.183	0.000	3.870	12.597	2.314	1.173	0.899
Sawyer	1.275	0.000	0.000	0.000	0.000	4.452	1.310	1.571	1.423
Shawano	0.653	0.000	0.832	0.000	1.510	0.573	0.954	2.071	0.762
Sheboygan	1.095	0.323	0.793	0.000	1.157	1.258	0.858	0.870	0.751
St. Croix	0.761	0.183	0.749	0.000	1.380	0.390	0.927	1.210	0.783
Taylor	0.580	0.000	0.000	0.000	0.000	0.000	0.573	1.465	0.807
Trempealeau	1.062	0.000	0.000	0.000	0.000	0.000	0.654	1.531	0.840
Vernon	0.601	0.000	0.000	0.000	0.000	0.000	0.541	1.056	0.773
Vilas	1.580	0.000	0.000	0.000	4.293	5.229	1.602	1.599	2.451
Walworth	1.808	1.405	0.371	0.000	2.195	4.023	1.255	0.927	1.585
Washburn	0.910	0.000	0.000	0.000	0.000	0.000	0.821	1.518	1.019
Washington	1.044	0.154	0.851	0.000	1.301	0.255	0.750	1.337	0.764
Waupaca	0.594	0.000	0.687	0.000	1.611	0.821	0.842	1.177	1.077
Waushara	0.605	0.000	0.000	0.000	0.000	0.000	0.752	1.001	1.007
Wood	0.929	0.510	1.228	0.000	0.000	0.561	0.853	1.548	0.931



Surplus-Leakage Wisconsin Counties: Service Sectors 2022

	517 - Telecommunications	518 - Data Processing, Hosting, and Related Services	519 - Other Information Services	522 - Credit Intermediation and Related Activities	524 - Insurance Carriers and Related Activities	531 - Real Estate	532 - Rental and Leasing Services	541 - Professional, Scientific, and Technical Services	551 - Management of Companies and Enterprises
Adams	7,116,663	246,092	1,549,630	361,705	129,600	795,115	2,642,184	5,162,326	1,534,502
Ashland	706,543	584,616	1,177,247	246,744	98,456	604,045	10,223	473,515	1,165,754
Barron	3,515,431	2,083,150	4,300,774	1,358,939	359,686	2,206,727	2,077,850	8,127,550	4,258,790
Bayfield	3,758,885	685,452	1,417,791	642,499	118,574	727,468	2,630,040	246,717	1,403,950
Brown	1,522,664	6,585,531	11,208,314	647,368	424,987	135,869	1,536,262	25,690,126	14,721,773
Buffalo	14,746	541,088	1,103,512	435,315	92,290	566,212	1,627,142	2,519,427	1,092,740
Burnett	2,360,611	1,139,809	1,306,840	793,720	109,295	670,539	1,791,312	1,443,546	1,294,083
Calumet	3,380,416	3,641,171	5,098,818	311,357	426,428	2,616,203	4,772,669	7,602,403	669,534
Chippewa	4,699,013	108,995	5,698,158	164,867	476,553	2,923,724	2,302,202	1,115,262	734,324
Clark	3,217,452	1,550,893	2,747,377	1,849,896	229,771	1,409,679	5,056,147	7,191,883	2,720,557
Columbia	6,489,718	2,474,219	5,594,111	2,898,435	467,851	292,598	1,483,176	15,217,919	62,347
Crawford	7,700,161	568,472	1,258,066	603,393	105,216	645,513	2,956,817	444,322	1,245,785
Dane	26,593,582	30,255,130	17,818,259	4,552,164	1,374,385	21,695,612	15,697,763	159,091,538	21,108,389
Dodge	1,407,156	3,835,556	4,327,865	605,551	624,841	1,611,033	5,701,652	6,197,563	3,679,723
Door	2,344,146	1,638,456	3,365,668	291,593	281,480	14,741,099	3,193,103	12,446,023	3,332,813
Douglas	1,437,397	752,718	3,583,337	375,612	299,684	1,838,609	6,760,150	1,348,451	3,548,356
Dunn	502,690	1,733,367	3,524,773	1,086,686	294,787	1,808,560	2,682,736	4,158,499	3,692,204
Eau Claire	17,963,806	2,536,104	9,769,517	2,088,451	624,046	3,157,923	5,386,764	11,120,862	9,674,147
Florence	584,683	403,355	462,463	238,949	38,677	237,290	1,177,336	1,446,211	457,949
Fond du Lac	4,840,304	3,673,424	2,398,563	629,860	3,821,751	1,814,387	2,742,515	12,744,091	5,566,547
Forest	823,672	608,015	697,115	263,096	58,302	357,690	1,320,180	1,177,165	690,310
Grant	5,564,178	2,443,266	4,234,409	1,895,577	354,135	2,172,675	4,024,013	9,420,398	4,193,073
Green	7,107,712	451,941	3,591,218	1,658,371	300,344	1,842,653	4,975,817	6,718,916	3,556,161
Green Lake	362,166	537,342	1,502,229	331,105	125,636	770,793	3,049,963	2,403,474	1,487,564
Iowa	720,509	754,803	2,179,416	695,444	182,271	1,118,258	710,577	2,270,261	2,158,141
Iron	190,054	459,528	526,869	127,659	44,064	270,336	957,360	3,678,893	521,726
Jackson	1,163,264	1,003,469	1,701,087	714,169	142,267	872,828	2,732,197	4,163,719	1,684,481
Jefferson	2,442,697	2,990,654	2,699,900	2,719,379	633,748	53,676	5,252,991	9,652,290	7,503,769
Juneau	3,971,093	1,177,390	1,947,173	845,413	162,848	999,094	2,669,513	3,415,427	1,928,165
Kenosha	10,108,383	2,912,652	19,639,608	5,710,629	151,799	2,608,107	2,429,688	22,115,532	2,500,699
Kewaunee	356,079	949,173	1,834,807	619,594	153,450	941,439	4,162,033	5,630,398	1,816,896
La Crosse	2,988,112	479,110	4,318,631	153,863	498,171	365,200	5,264,381	4,576,262	4,801,956
Lafayette	1,509,210	758,107	1,352,248	410,306	113,092	693,838	3,099,394	4,472,929	1,339,047
Langlade	1,639,135	488,490	1,571,731	121,815	131,448	806,455	2,344,068	3,177,500	1,556,388



	561 - Administrative and Support Services	611 - Educational Services	621 - Ambulatory Health Care Services	711 - Performing Arts, Spectator Sports, and Related Industries	713 - Amusement, Gambling, and Recreation Industries	721 - Accommodation	722 - Food Services and Drinking Places	811 - Repair and Maintenance	812 - Personal and Laundry Services
Adams	1,011,342	537,327	340,852	1,794,503	4,655,829	6,269,151	17,158,232	551,578	2,494,447
Ashland	670,800	408,205	258,944	1,363,276	3,537,012	4,762,646	3,653,228	1,218,505	666,759
Barron	4,633,318	1,491,275	277,085	4,980,385	1,313,764	1,471,096	5,864,321	2,465,085	2,227,275
Bayfield	469,296	491,613	311,854	1,641,831	12,281,965	15,448,823	7,080,682	2,000,878	287,754
Brown	414,275	202,041	2,405,705	154,806,743	21,467,814	12,604,251	53,717,420	11,117,078	4,289,917
Buffalo	1,429,263	382,638	242,726	1,277,890	3,315,479	4,464,348	6,982,966	853,815	823,338
Burnett	2,013,195	453,141	287,449	1,513,348	3,926,373	5,286,927	1,658,305	906,367	1,005,129
Calumet	6,836,988	1,507,607	214,214	5,904,537	15,319,290	20,627,680	30,800,935	9,787,153	4,075,511
Chippewa	16,185,577	1,975,812	1,189,471	6,598,585	4,240,702	8,426,041	16,507,021	8,276,253	5,176,495
Clark	895,913	952,641	604,306	3,181,520	8,254,436	11,114,737	32,624,663	5,507,230	1,961,024
Columbia	6,513,386	1,939,733	441,356	6,478,095	20,428,594	1,835,938	19,164,771	5,404,237	2,952,900
Crawford	1,879,194	436,229	276,721	1,456,866	3,779,832	4,487,429	5,619,600	455,251	1,652,836
Dane	52,638,497	62,612,333	9,968,128	38,310,686	79,862,030	21,973,317	77,483,041	109,320,919	20,436,271
Dodge	8,398,873	2,048,642	2,982,252	8,651,853	3,606,107	30,225,514	63,555,897	12,421,443	101,451
Door	14,252,747	1,167,031	263,537	3,897,513	15,595,821	87,674,818	67,025,984	3,389,613	5,754,638
Douglas	3,891,544	1,242,506	214,835	4,149,578	10,766,058	131,174	14,479,168	16,130,679	449,370
Dunn	4,768,091	1,222,200	775,300	4,081,759	10,590,104	14,259,752	11,827,990	2,944,254	1,440,169
Eau Claire	5,453,388	2,477,309	1,576,867	11,313,301	371,099	1,514,605	32,569,918	7,417,993	12,178,530
Florence	1,565,317	160,357	101,722	535,542	1,389,462	1,870,933	8,893,793	2,417,426	616,590
Fond du Lac	6,313,710	1,288,930	967,779	11,103,908	17,132,751	19,163,232	17,891,578	11,276,763	2,687,696
Forest	1,686,795	241,722	153,336	807,274	2,094,467	2,820,235	4,058,084	3,644,015	180,713
Grant	4,415,572	536,386	291,970	4,903,533	12,722,192	17,130,645	23,329,831	13,464,805	4,498,751
Green	5,435,004	1,245,239	789,915	4,158,705	10,789,738	14,528,563	22,883,150	15,089,795	2,657,008
Green Lake	3,132,659	520,891	330,426	1,739,612	4,513,414	6,077,388	11,676,603	1,536,958	785,498
Iowa	2,972,003	755,703	479,379	2,523,809	6,548,009	5,115,089	20,177,241	947,260	1,786,705
Iron	609,421	182,690	115,889	610,125	1,582,967	2,131,491	1,660,414	2,754,092	53,180
Jackson	1,975,515	589,845	374,167	1,969,894	5,110,880	6,881,886	5,429,508	497,470	846,192
Jefferson	4,808,822	1,812,205	583,776	8,775,182	6,336,496	19,087,478	35,459,882	9,365,012	2,158,580
Juneau	2,850,563	675,174	428,295	2,254,867	5,850,241	5,726,669	786,031	5,541,539	85,959
Kenosha	3,301,154	1,159,996	374,990	18,630,745	11,595,971	38,123,709	5,172,078	17,803,880	4,855,451
Kewaunee	4,425,583	636,211	403,579	2,124,744	5,512,638	7,422,860	18,662,446	1,538,598	885,341
La Crosse	5,449,339	2,027,471	51,007	13,316,457	19,476,977	10,439,526	50,426,560	10,090,567	1,837,883
Lafayette	3,134,290	468,886	297,437	1,565,931	4,062,800	5,470,628	13,885,752	8,483,941	149,250
Langlade	2,210,621	544,991	345,714	1,820,097	4,722,232	6,358,565	1,020,146	2,110,487	690,383




Surplus-Leakage Wisconsin Counties: Service Sectors 2022

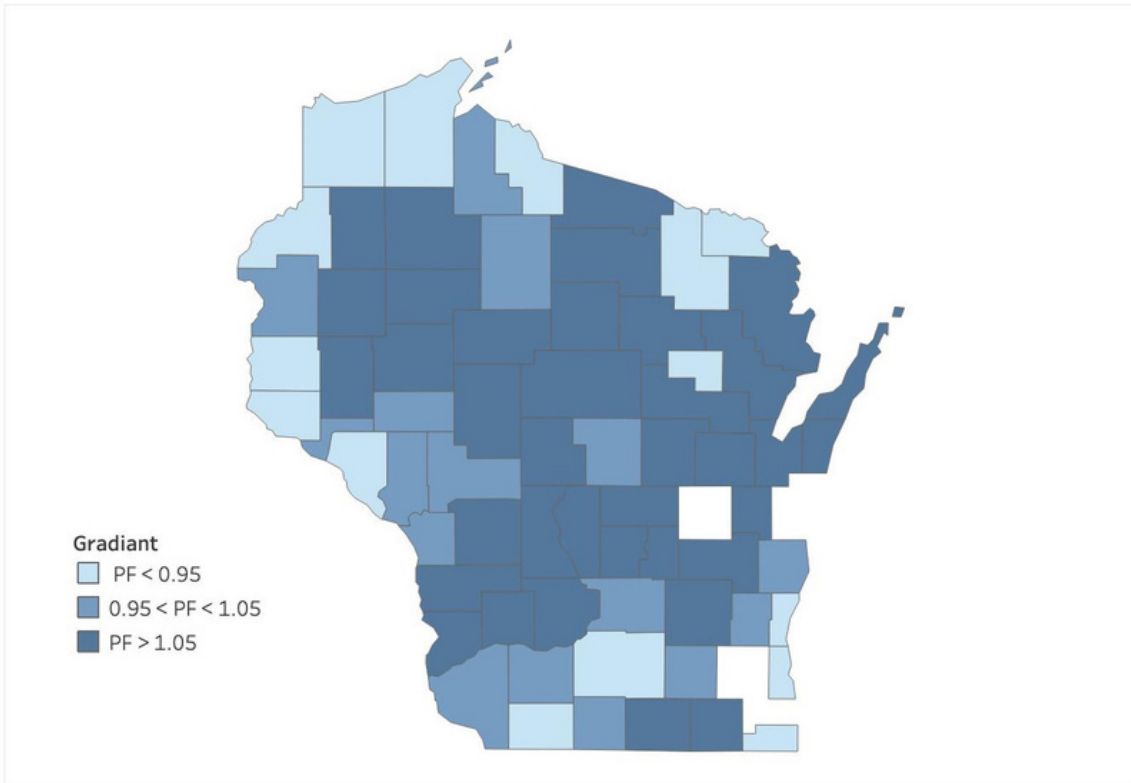
	517 - Telecommunications	518 - Data Processing, Hosting, and Related Services	519 - Other Information Services	522 - Credit Intermediation and Related Activities	524 - Insurance Carriers and Related Activities	531 - Real Estate	532 - Rental and Leasing Services	541 - Professional, Scientific, and Technical Services	551 - Management of Companies and Enterprises
Lincoln	134,144	1,140,154	2,340,691	732,194	195,758	1,201,008	2,973,702	1,620,387	2,317,841
Marathon	1,591,293	3,935,814	3,920,062	1,216,686	1,220,087	464,260	5,593,272	10,509,985	1,302,201
Marinette	4,565,222	1,321,063	3,386,707	201,865	283,240	1,737,719	3,043,253	7,491,630	3,353,646
Marquette	3,313,103	661,086	1,163,472	610,240	97,304	596,977	1,813,902	2,981,514	1,152,114
Menominee	414,176	247,555	283,832	276,036	23,738	145,634	995,458	1,148,692	281,061
Milwaukee	2,485,179	59,625,321	52,444,227	39,437,916	3,346,427	25,934,486	139,074,594	81,559,078	104,452,869
Monroe	3,866,508	1,978,928	3,628,976	1,294,457	303,501	1,862,027	352,974	2,972,504	3,593,550
Oconto	1,340,440	1,981,044	3,326,697	1,820,106	278,221	1,706,928	7,634,506	11,148,400	3,294,222
Oneida	2,630,618	1,801,515	3,445,191	1,437,145	288,131	1,767,727	999,999	1,064,332	3,411,559
Outagamie	7,152,268	4,865,584	801,165	102,256	153,375	1,743,624	20,620,495	9,117,852	7,252,759
Ozaukee	36,734,603	1,633,976	1,913,735	2,993,226	1,187,217	5,231,671	25,848,739	28,407,560	10,013,041
Pepin	1,197,512	590,837	677,420	370,228	56,655	347,584	1,722,041	576,913	670,807
Pierce	825,736	1,795,648	3,800,269	884,529	317,827	1,949,917	4,697,153	3,694,641	3,763,171
Polk	412,477	1,878,669	3,877,405	1,665,716	324,278	1,989,496	7,295,326	6,775,362	3,839,553
Portage	7,696,688	1,110,329	6,201,177	111,240	8,803,227	706,704	4,978,936	7,940,213	6,140,642
Price	29,516	741,385	1,141,666	324,509	95,481	585,789	2,679,603	1,850,458	1,130,521
Richland	2,125,384	878,836	1,381,269	859,066	115,519	708,729	4,794,414	3,921,883	1,367,786
Rock	16,032,015	2,187,514	5,414,184	236,683	352,602	1,097,019	1,931,473	1,670,516	8,758,575
Rusk	648,285	688,535	1,128,843	694,366	94,408	579,209	82,338	3,378,867	1,117,823
Sauk	3,618,908	2,269,761	6,292,178	2,179,493	526,232	1,719,117	5,280,188	817,094	2,004,782
Sawyer	627,717	3,711	1,478,564	597,028	123,656	758,651	1,332,160	4,263,338	1,464,130
Shawano	3,604,762	1,433,768	3,251,432	1,566,651	271,926	1,668,309	5,719,869	9,185,922	3,219,691
Sheboygan	2,897,624	3,590,028	9,347,460	1,901,750	437,145	818,728	13,636,229	8,536,743	21,649,428
St. Croix	5,233,256	5,028,585	299,035	2,618,324	295,379	1,677,624	8,855,340	24,147,193	2,171,480
Taylor	854,316	929,594	1,584,903	615,132	132,550	813,214	2,924,941	4,403,856	1,569,432
Trempealeau	6,593,335	611,107	2,453,160	512,810	205,165	1,258,716	4,247,317	2,107,848	2,429,212
Vernon	187,150	1,008,280	2,411,355	1,510,560	201,668	1,237,266	4,662,961	4,753,733	2,387,816
Vilas	1,542,439	1,303,447	2,169,060	712,889	181,405	1,112,944	552,229	9,955,598	2,147,885
Walworth	5,698,239	4,256,934	13,546,843	1,408,415	344,827	13,569,027	6,976,402	10,192,257	8,866,694
Washburn	396,119	803,871	1,439,635	733,051	120,401	738,676	2,095,208	3,464,820	1,425,581
Washington	8,209,776	2,428,528	1,527,084	2,127,853	377,675	2,521,756	13,398,710	20,963,243	15,018,714
Waupaca	630,445	2,442,270	4,365,370	1,639,532	365,088	2,239,870	7,067,432	11,505,458	4,322,755
Waushara	1,801,990	1,167,322	1,887,639	1,088,752	157,869	968,547	2,106,675	2,575,567	1,869,212
Wood	10,720,153	2,821,770	6,329,600	2,108,424	529,362	524,352	2,111,089	12,799,760	10,085,889




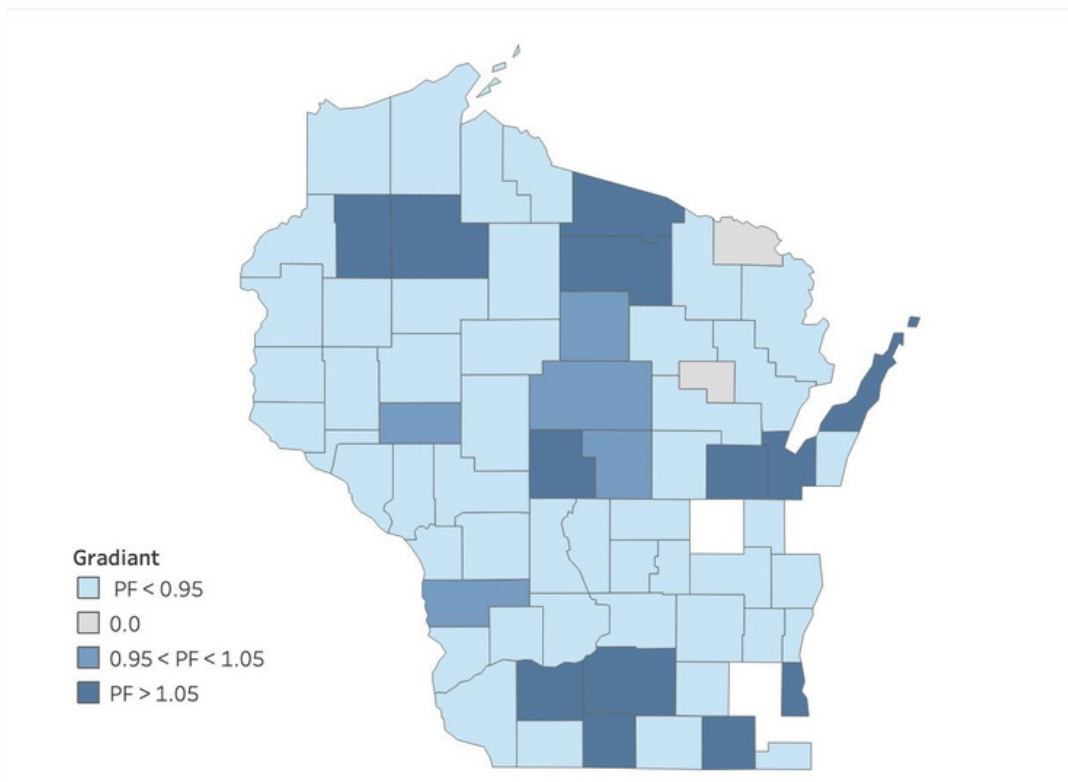
Surplus-Leakage Wisconsin Counties: Service Sectors 2022

	561 - Administrative and Support Services	611 - Educational Services	621 - Ambulatory Health Care Services	711 - Performing Arts, Spectator Sports, and Related Industries	713 - Amusement, Gambling, and Recreation Industries	721 - Accommodation	722 - Food Services and Drinking Places	811 - Repair and Maintenance	812 - Personal and Laundry Services
Lincoln	4,393,568	811,624	131,266	2,710,568	7,032,555	9,469,453	5,007,976	22,610,131	1,214,241
Marathon	5,949,954	1,997,369	1,462,024	15,220,095	2,564,953	16,651,091	33,032,517	14,493,690	4,682,149
Marinette	2,721,774	1,174,326	233,677	3,921,877	4,836,007	148,276	1,690,549	1,944,949	10,574,730
Marquette	2,258,975	403,429	255,914	1,347,325	3,495,627	4,706,920	8,027,744	2,891,586	689,173
Menominee	659,686	98,418	62,431	328,683	852,767	1,148,266	5,458,472	1,483,669	730,916
Milwaukee	198,829	5,490,681	1,256,288	232,128,964	32,474,692	31,385,106	375,486,122	112,587,788	25,630,060
Monroe	1,893,976	1,258,331	798,220	4,202,428	10,903,179	7,452,577	6,728,681	2,107,656	557,769
Oconto	2,558,591	1,153,518	731,732	3,852,384	148,242	13,458,423	26,065,902	8,823,895	3,737,403
Oneida	5,798,334	1,194,605	718,614	3,989,602	21,108,992	9,319,123	18,419,129	15,690,843	3,961,670
Outagamie	959,663	4,043,817	435,375	21,428,483	15,308,347	26,537,549	28,861,764	9,719,179	15,335,042
Ozaukee	3,866,363	3,172,592	1,217,404	16,438,786	3,136,431	38,339,078	114,071,050	23,252,621	10,763,191
Pepin	1,218,528	234,892	149,004	784,466	2,035,294	2,740,558	2,166,708	1,213,253	1,473,742
Pierce	7,458,192	1,317,727	43,348	4,400,790	11,417,827	15,374,295	26,797,266	12,095,479	717,840
Polk	4,863,854	1,344,473	283,157	4,490,114	11,649,579	15,686,353	15,624,361	6,026,086	2,857,250
Portage	4,078,129	915,717	364,806	7,181,091	18,631,305	6,063,121	9,228,249	4,000,728	366,427
Price	2,317,434	395,868	251,118	1,322,073	3,430,111	4,618,702	8,962,323	3,834,578	465,309
Richland	2,351,817	478,949	303,820	1,599,539	4,149,994	5,588,037	8,938,179	367,516	1,706,936
Rock	3,982,869	3,498,753	238,810	15,951,029	77,108,757	20,073,737	26,421,987	8,338,761	5,583,179
Rusk	392,572	391,421	248,297	1,307,223	3,391,583	4,566,824	9,405,465	1,981,616	145,513
Sauk	8,247,103	1,840,315	253,326	7,286,472	54,252,893	295,208,008	159,050,013	5,678,565	1,635,298
Sawyer	1,378,237	512,686	325,221	1,712,208	4,442,314	20,648,106	8,824,150	4,409,508	1,612,267
Shawano	3,814,694	1,127,420	120,081	3,765,225	4,977,341	5,614,188	2,889,272	18,198,913	1,993,766
Sheboygan	3,603,748	2,633,836	511,303	12,997,074	5,306,513	11,730,852	30,666,623	7,629,176	7,190,500
St. Croix	8,201,408	2,871,355	560,024	11,733,274	11,580,967	24,988,890	14,205,283	11,128,980	5,667,901
Taylor	2,250,856	549,558	348,611	1,835,351	4,761,808	6,411,855	13,012,709	3,853,063	787,896
Trempealeau	516,189	850,623	539,591	2,840,810	7,370,467	9,924,458	16,341,210	6,803,037	1,012,452
Vernon	3,254,377	836,127	530,396	2,792,399	7,244,866	9,755,333	21,264,837	703,498	1,411,157
Vilas	4,256,564	752,112	477,101	2,511,816	21,457,348	37,107,845	25,104,210	6,792,186	8,104,811
Walworth	27,825,072	1,430,143	1,409,065	11,786,377	36,551,705	124,485,455	49,872,877	3,869,493	15,329,455
Washburn	437,925	499,187	316,658	1,667,127	4,325,352	5,824,158	4,946,524	3,898,160	68,947
Washington	2,245,620	4,439,042	495,892	17,524,149	13,696,670	45,630,794	72,854,517	26,657,664	9,213,839
Waupaca	5,992,589	1,513,673	300,759	5,055,188	8,013,486	3,166,936	13,278,004	4,047,953	870,016
Waushara	2,525,688	654,531	415,200	2,185,925	5,671,372	7,636,597	9,014,572	12,841	32,098
Wood	1,525,615	1,074,675	317,854	7,329,807	19,017,148	11,234,753	17,863,921	18,121,386	1,132,718

 Pull Factor 441 - Motor Vehicle and Parts Dealers: 2022

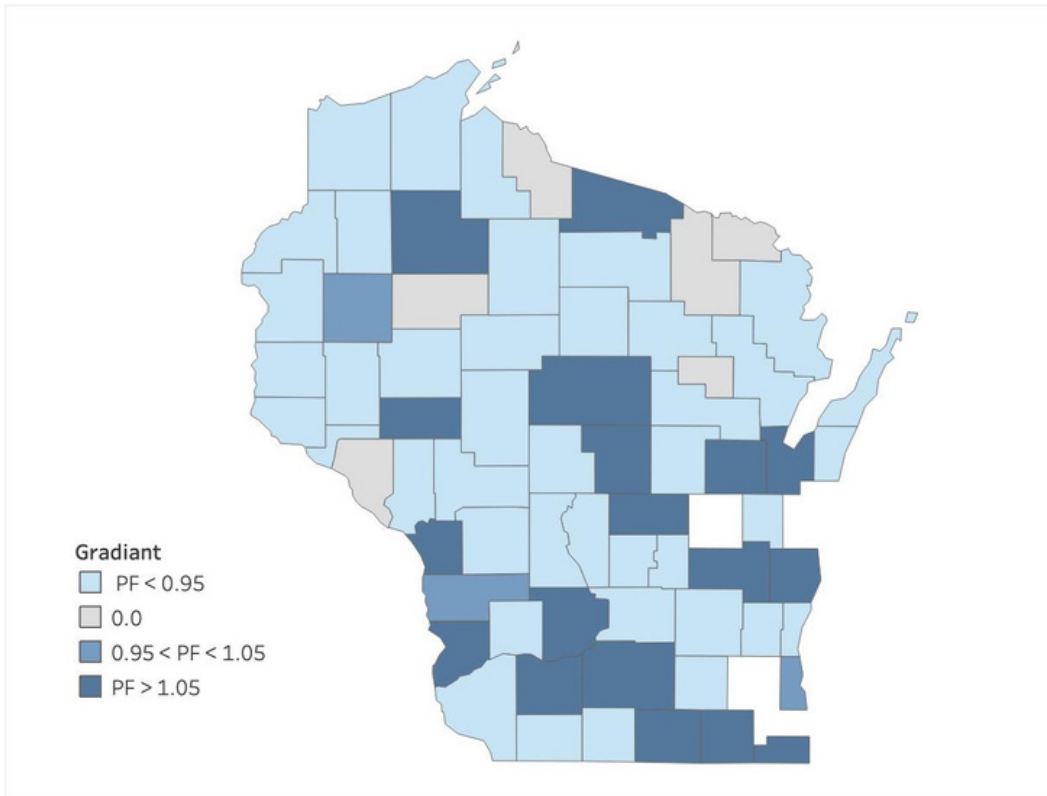


 Pull Factor 442 - Furniture and Home Furnishings Stores: 2022

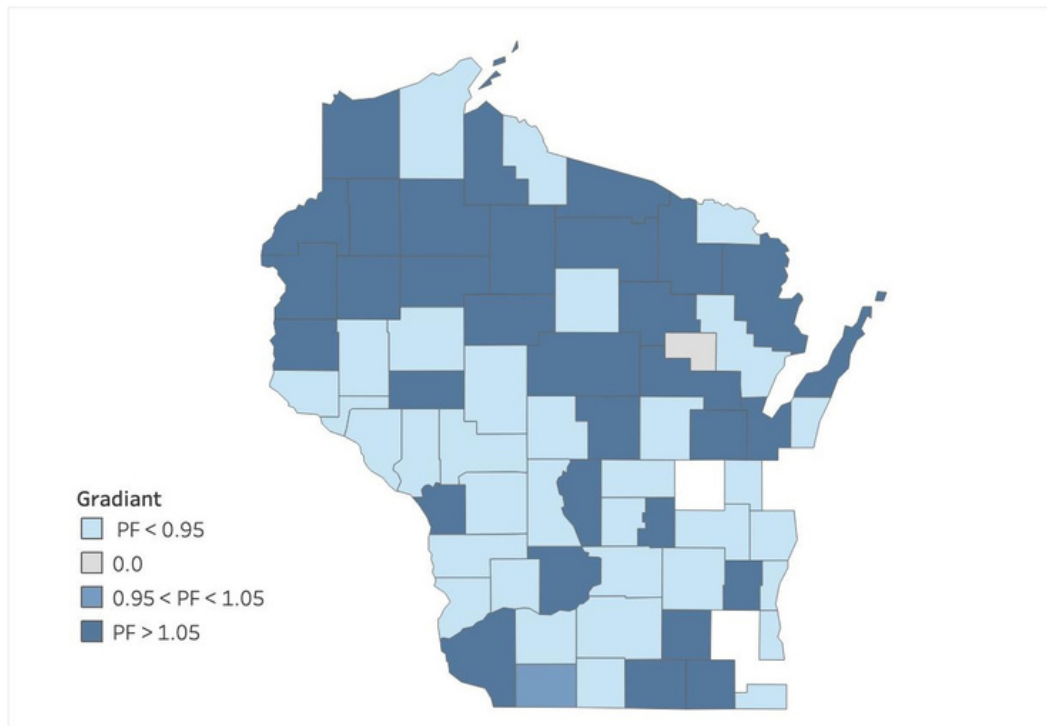




Pull Factor 443 - Electronics and Appliance Stores: 2022

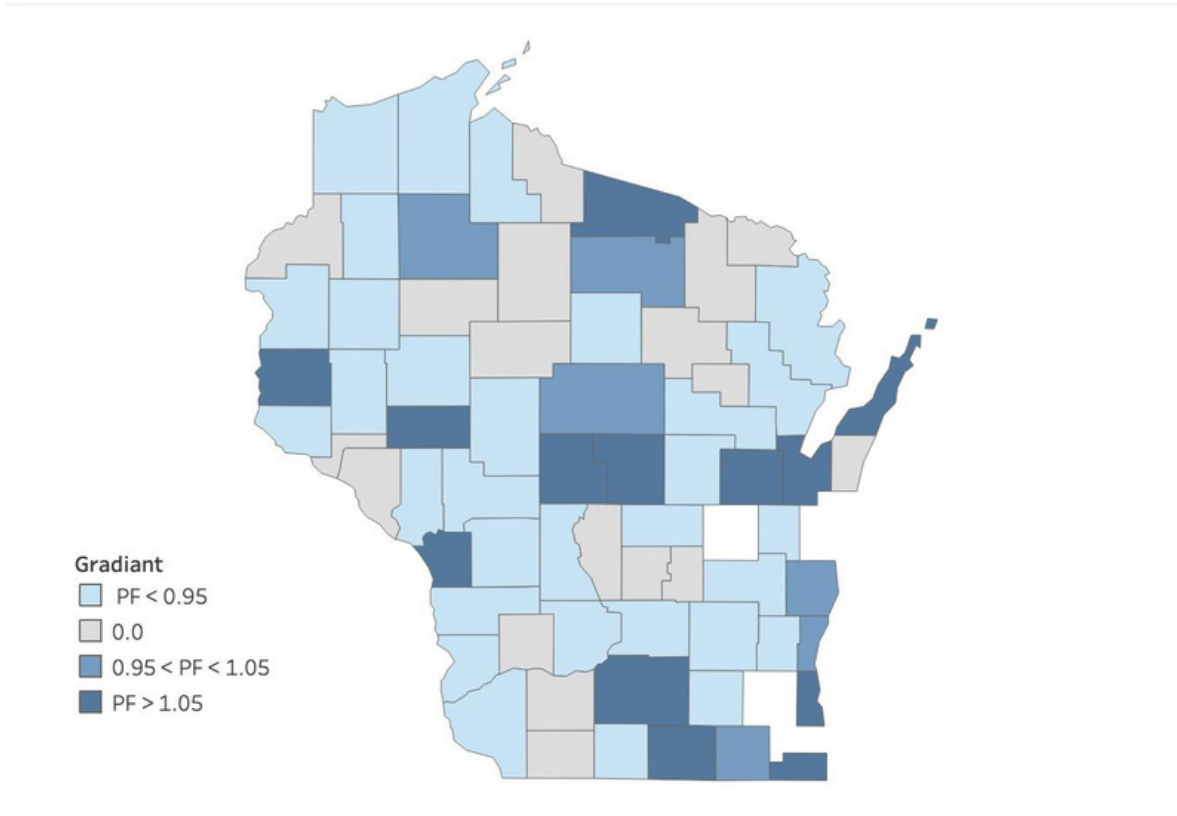


Pull Factor 444 - Building Material and Garden Equipment and Supplies Dealers: 2022

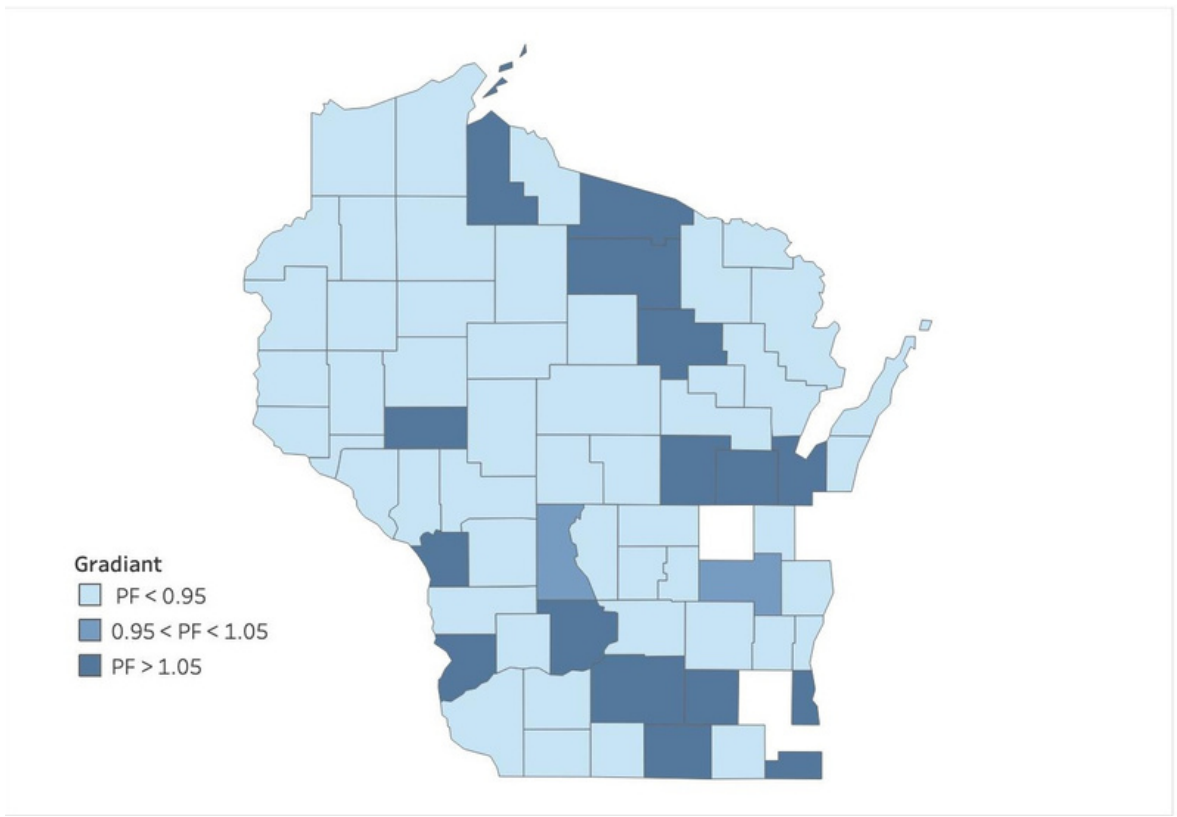




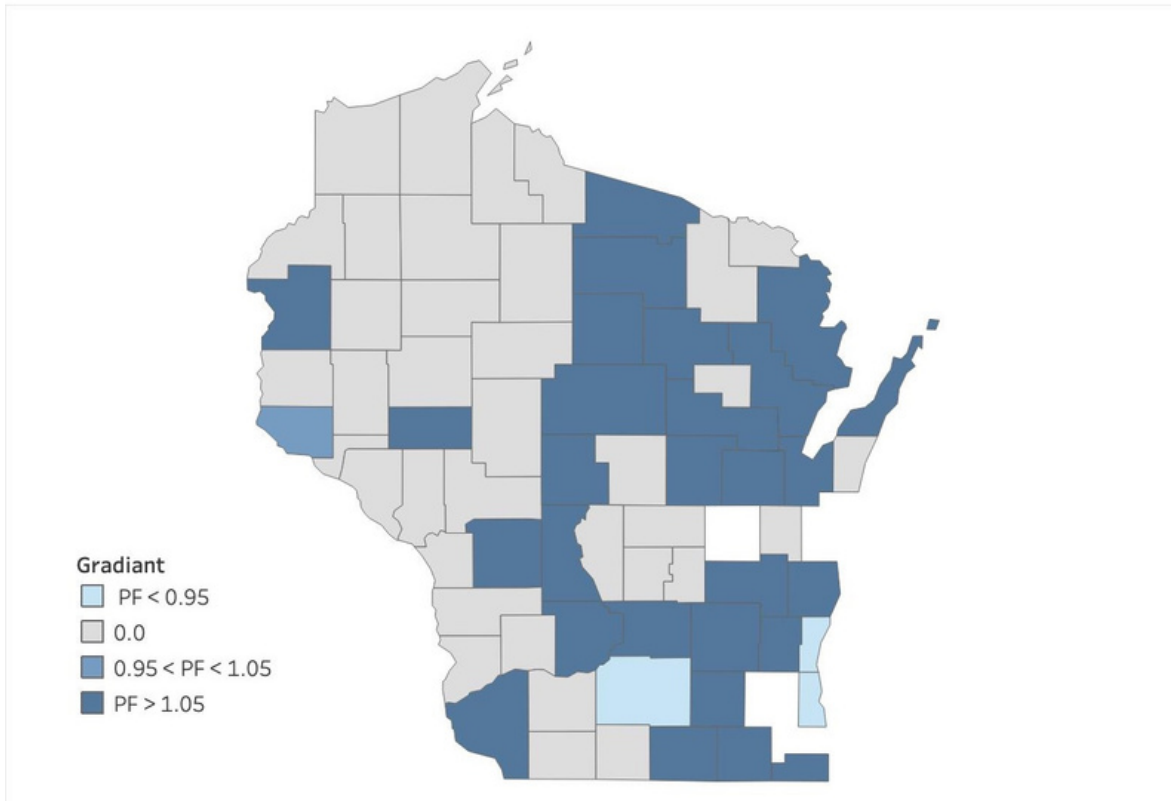
Pull Factor 445 - Food and Beverage Stores: 2022



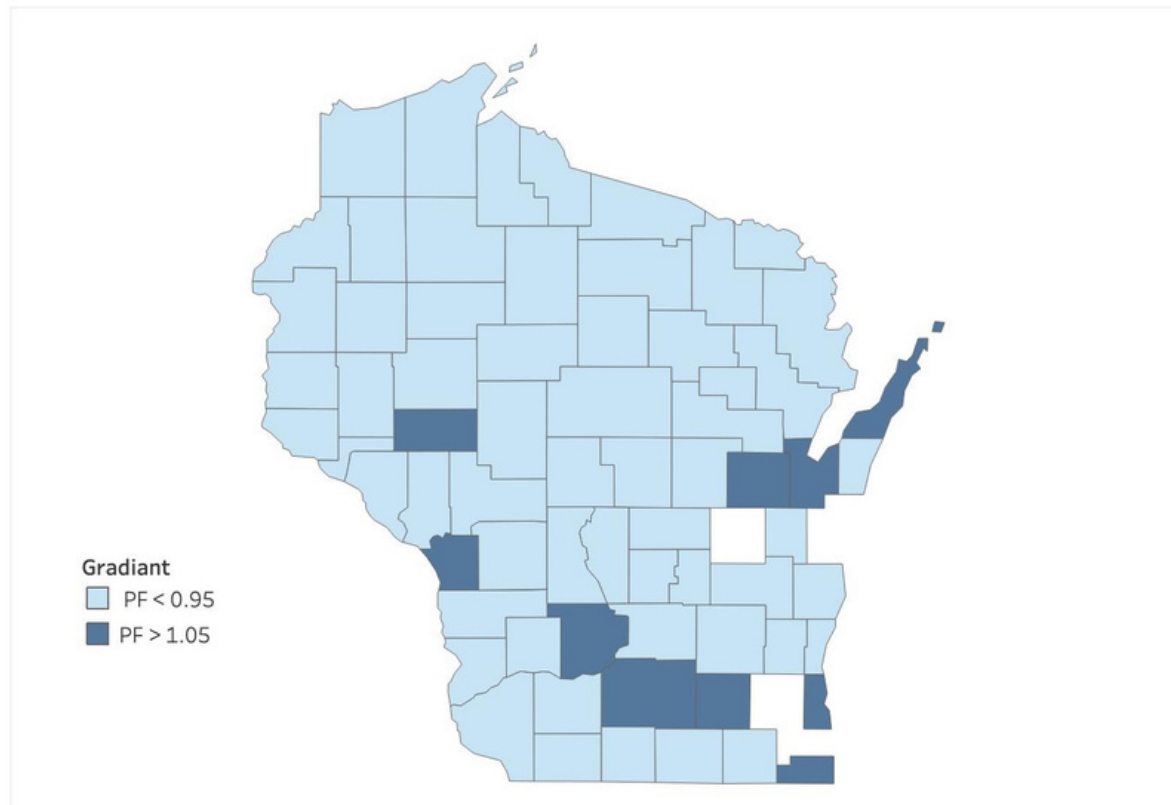
Pull Factor 446 - Health and Personal Care Stores: 2022



 Pull Factor 447 - Gasoline Stations: 2022

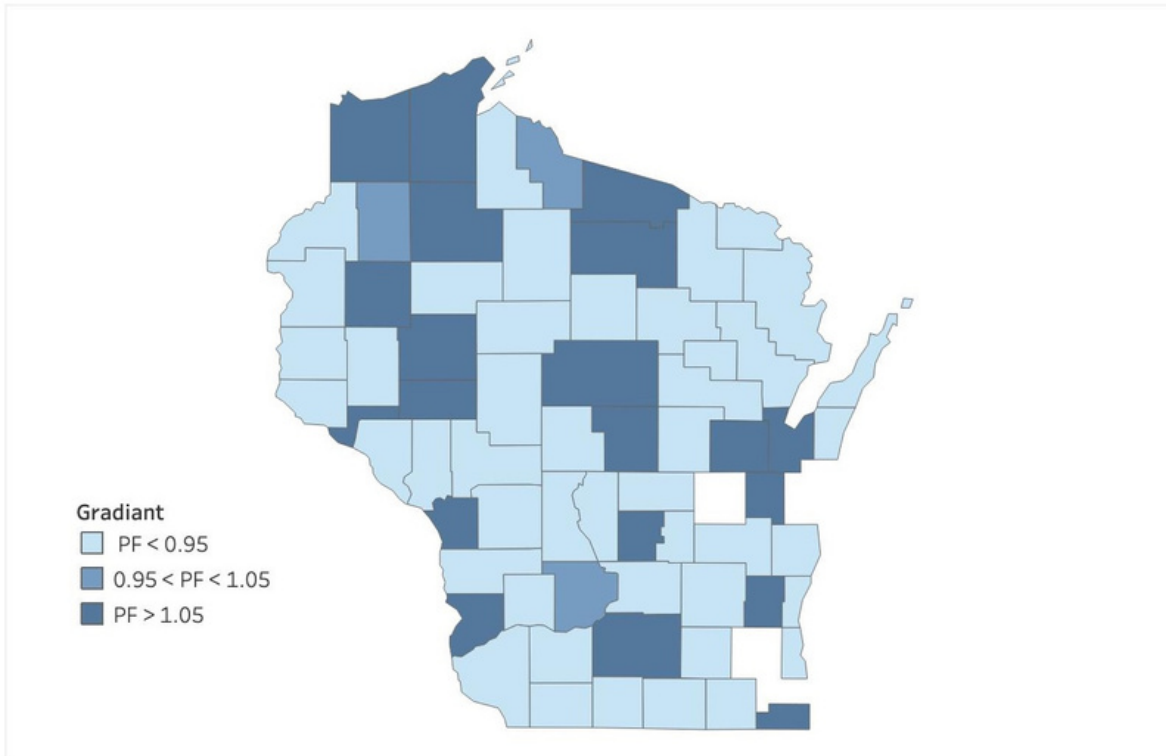


 Pull Factor 448 - Clothing and Clothing Accessories Stores: 2022

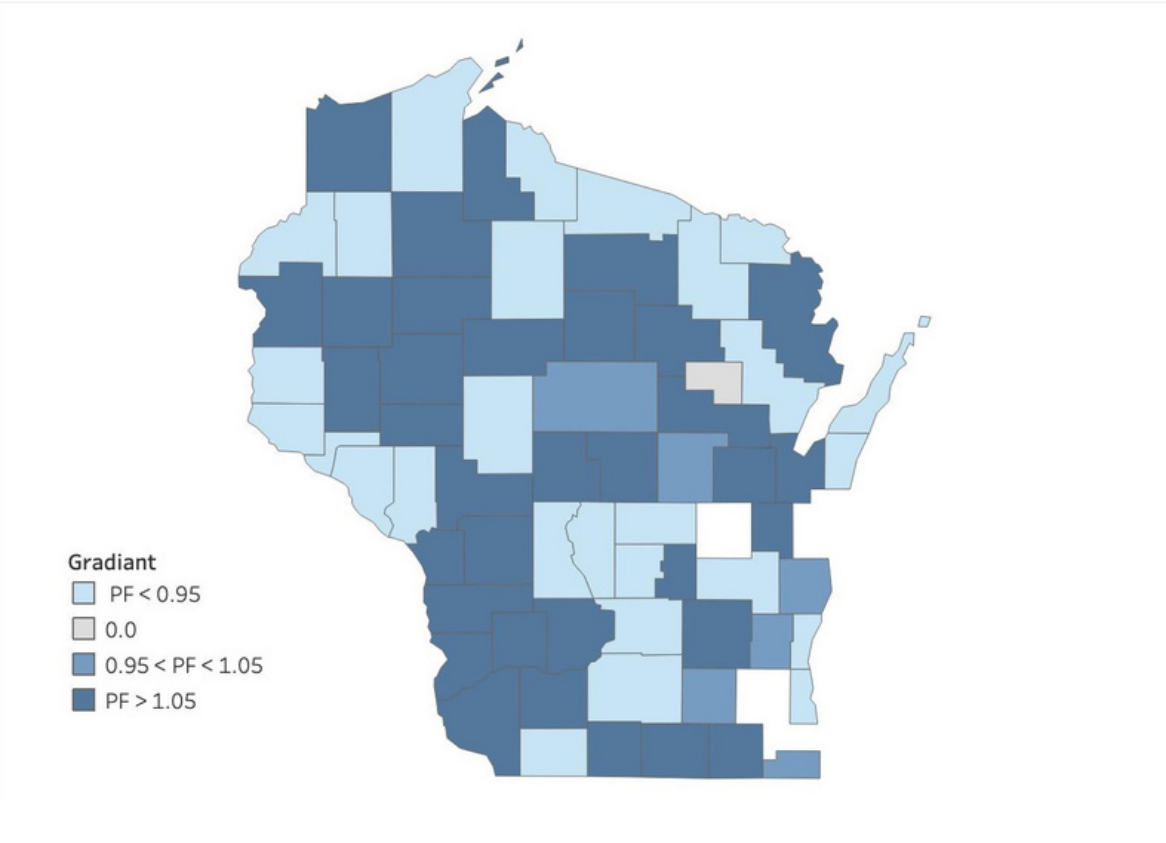




Pull Factor 451 - Sporting Goods, Hobby, Book, and Music Stores: 2022

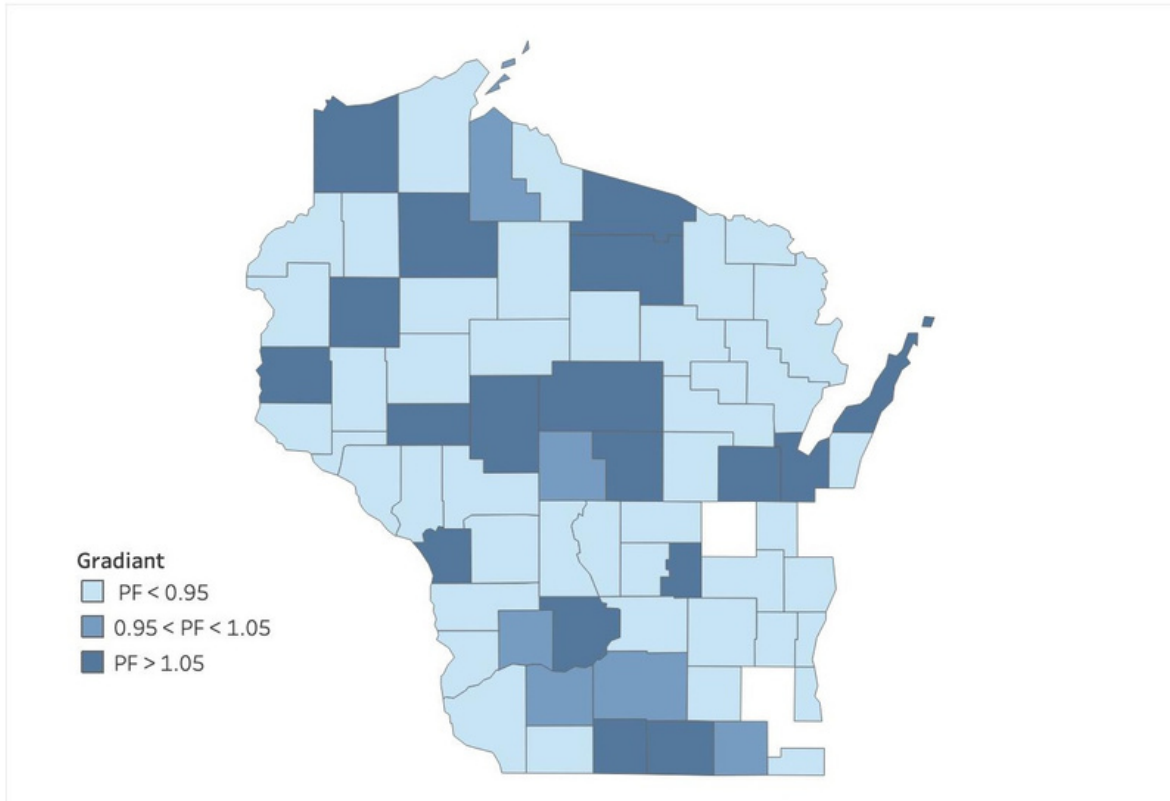


Pull Factor 452 - General Merchandise Stores: 2022

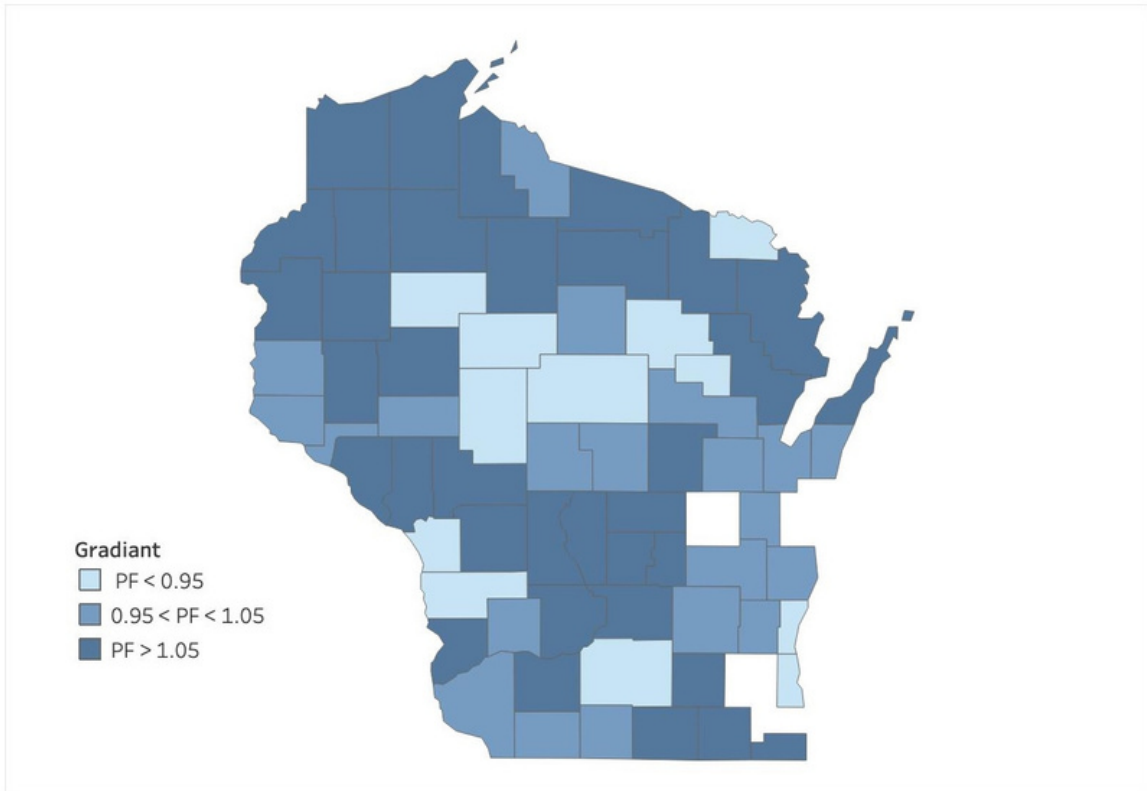




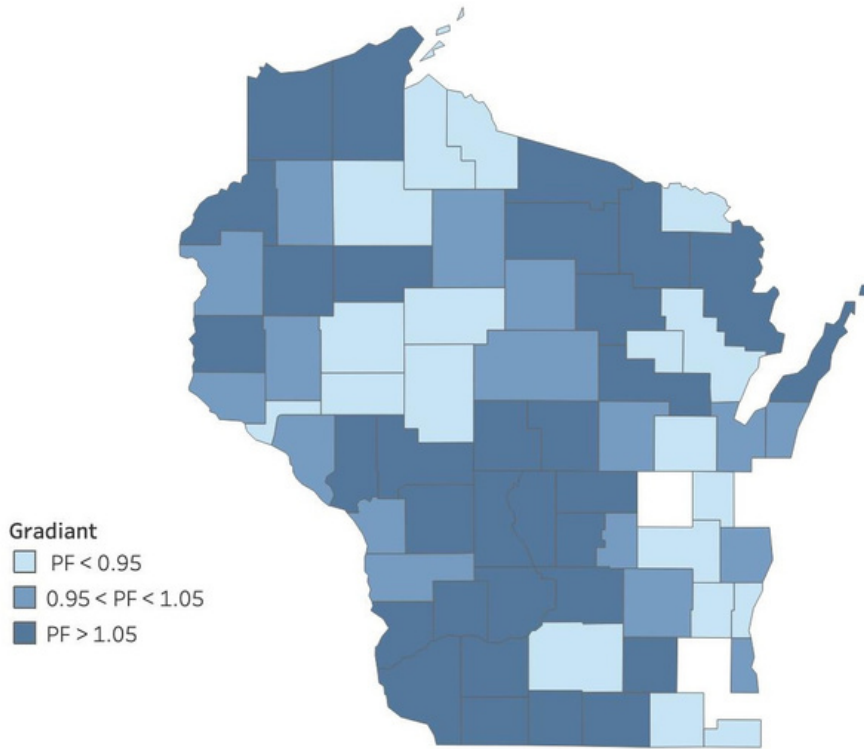
Pull Factor 453 - Miscellaneous Store Retailers: 2022




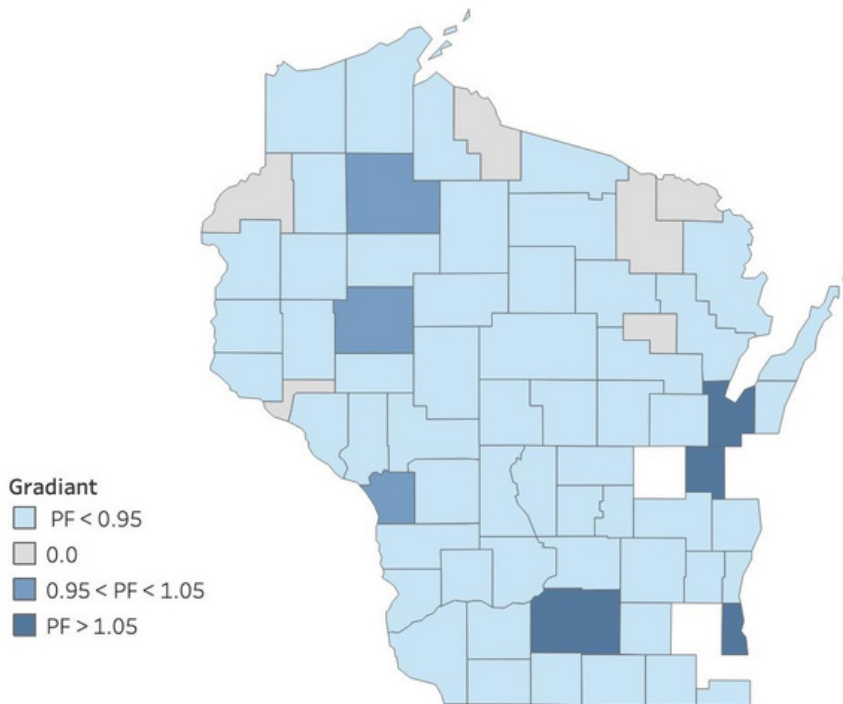
Pull Factor 454 - Nonstore Retailers: 2022




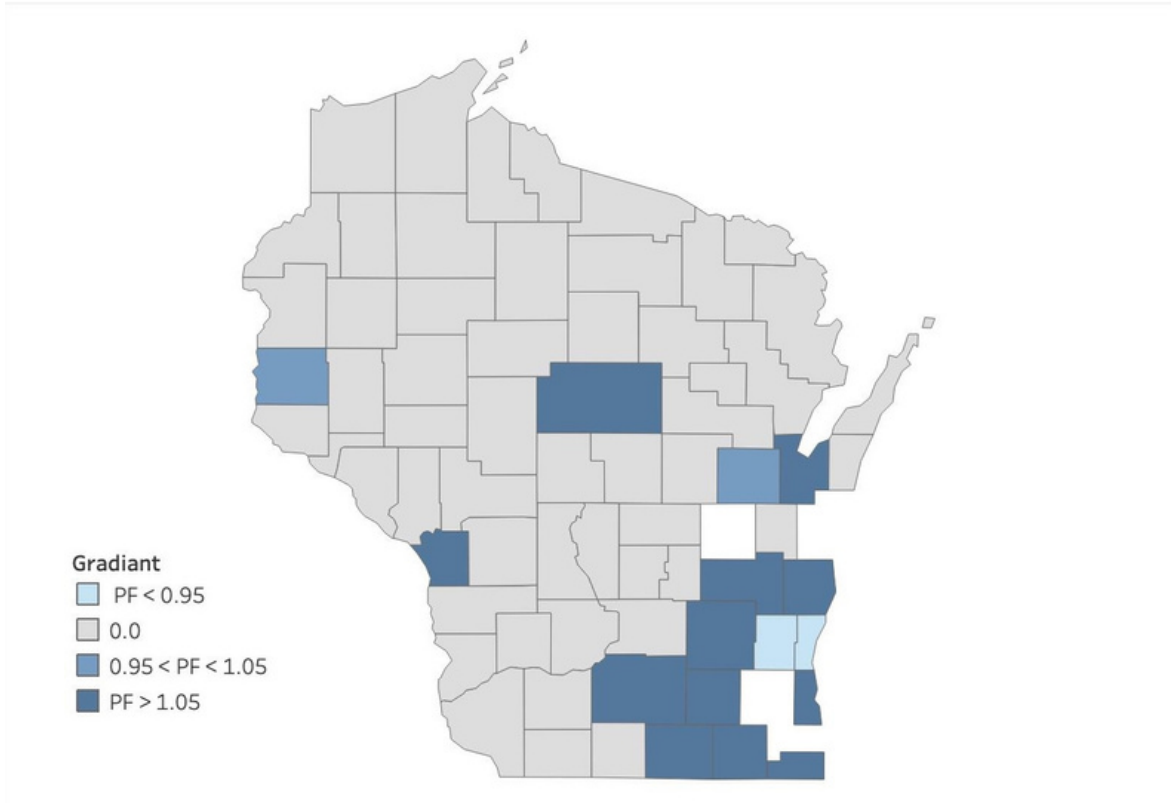
 Pull Factor 517 - Telecommunications: 2022




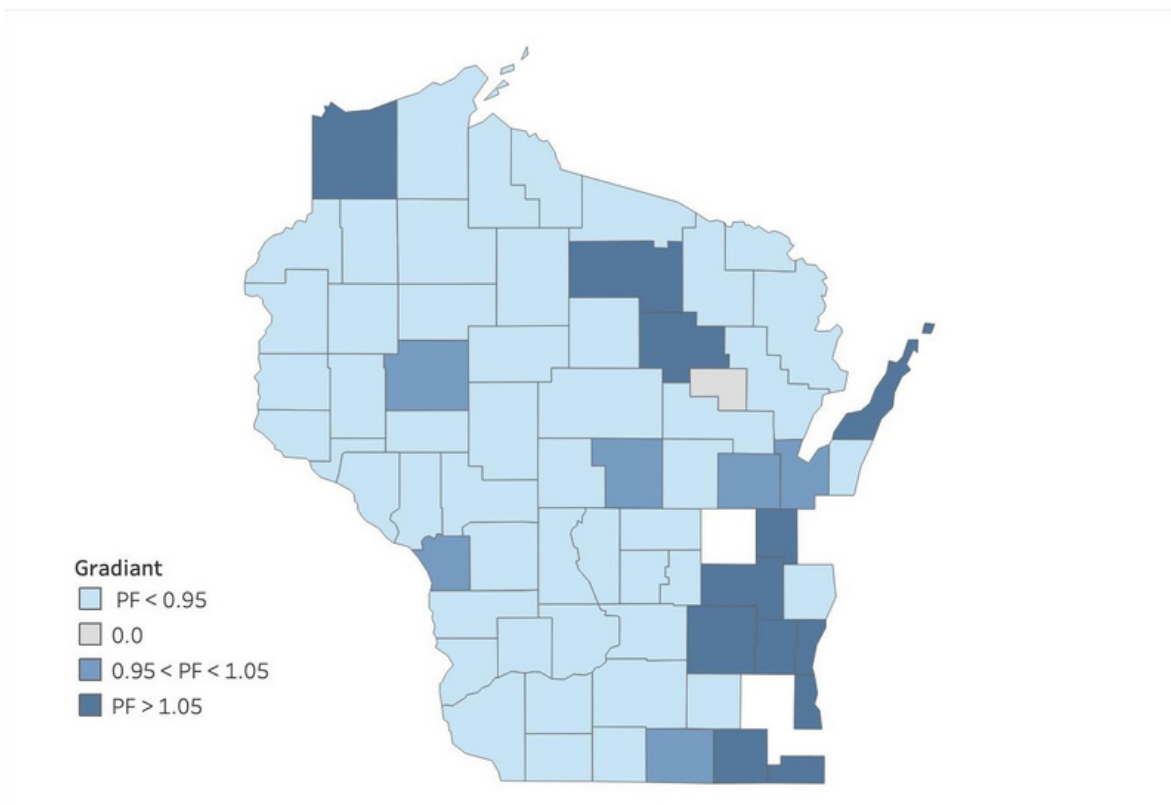
 Pull Factor 518 - Data Processing, Hosting, and Related Services: 2022



 Pull Factor 519 - Other Information Services: 2022

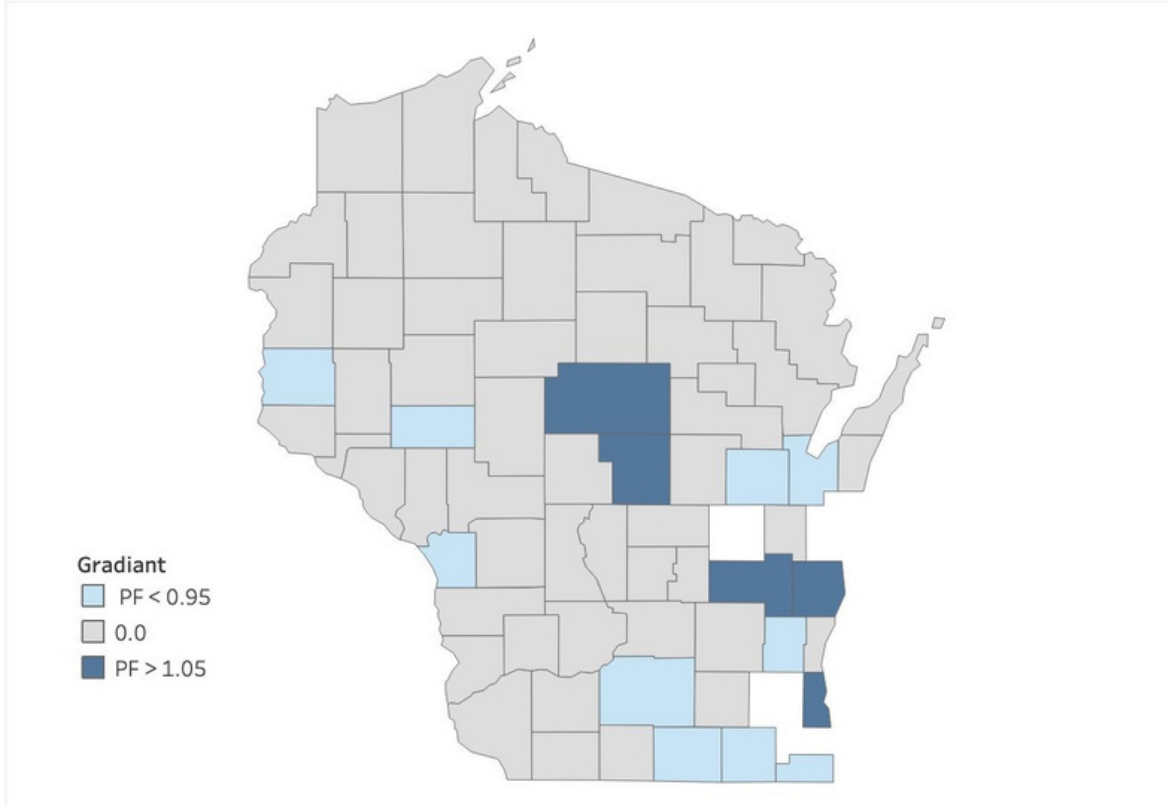


 Pull Factor 522 - Credit Intermediation and Related Activities: 2022

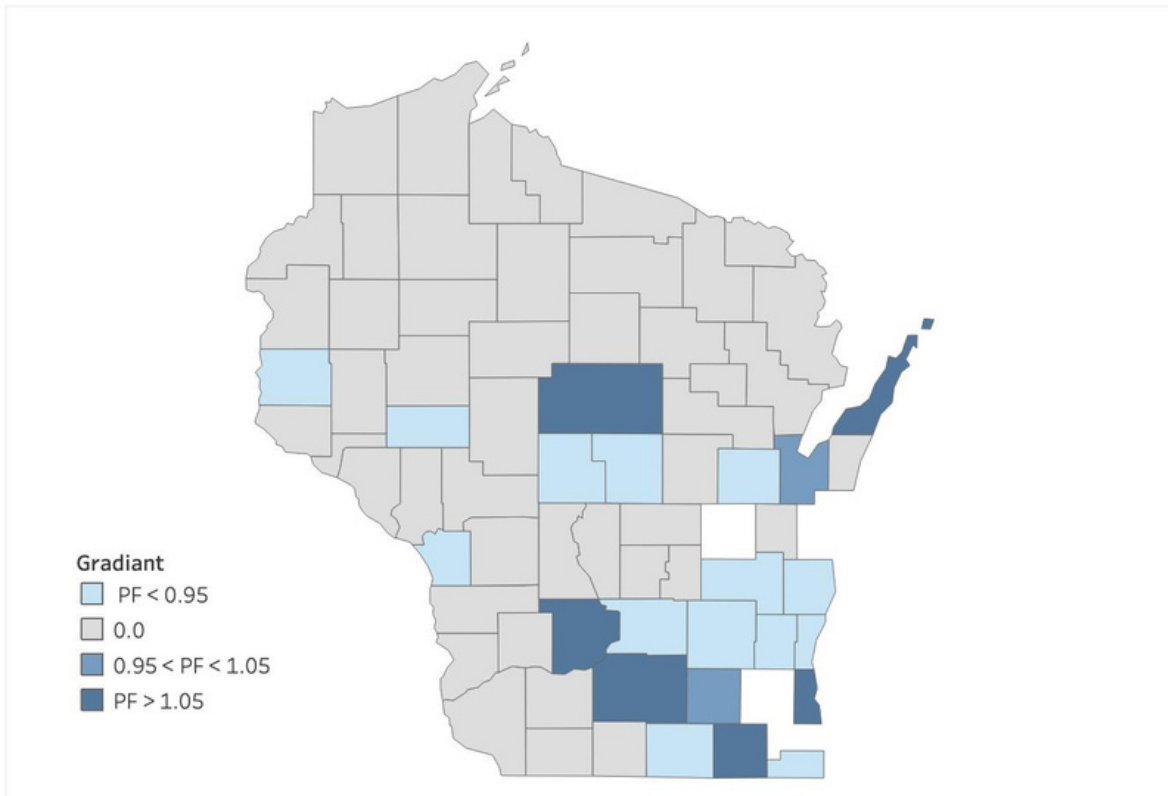




Pull Factor 524 - Insurance Carriers and Related Activities: 2022

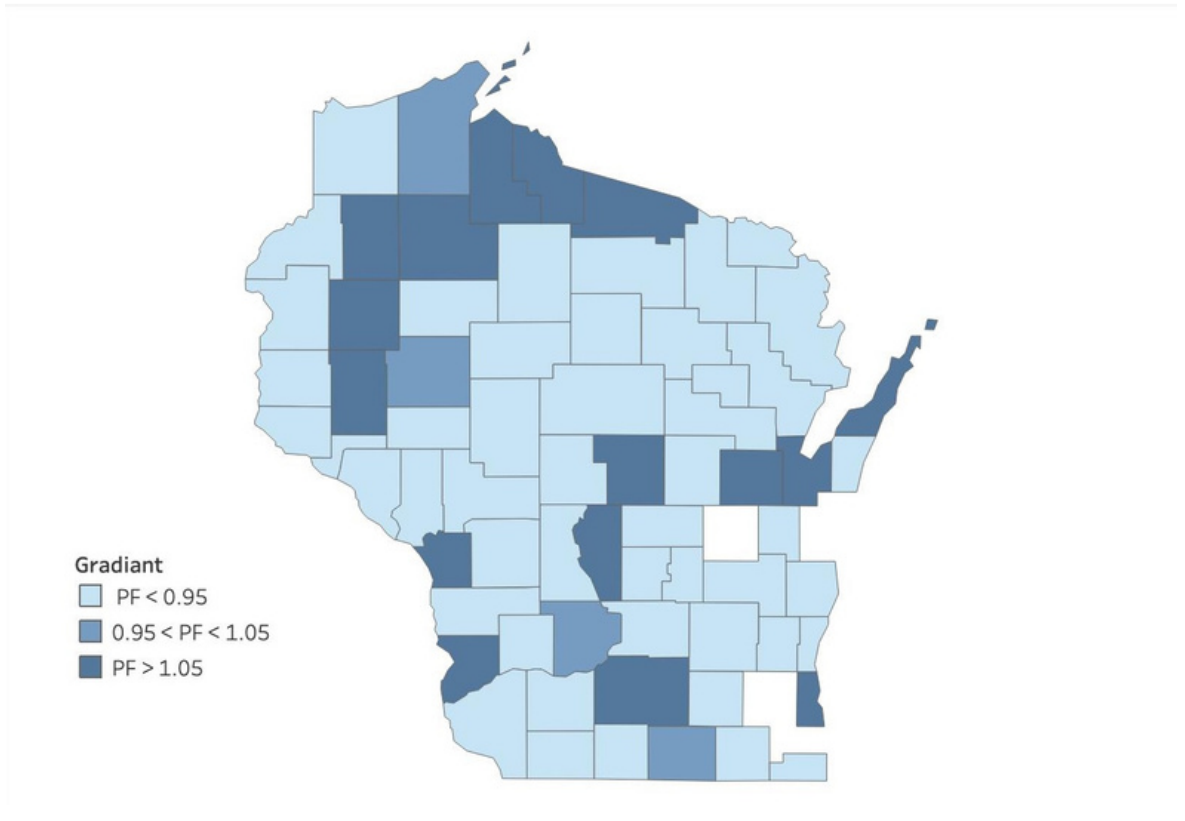


Pull Factor 531 - Real Estate: 2022

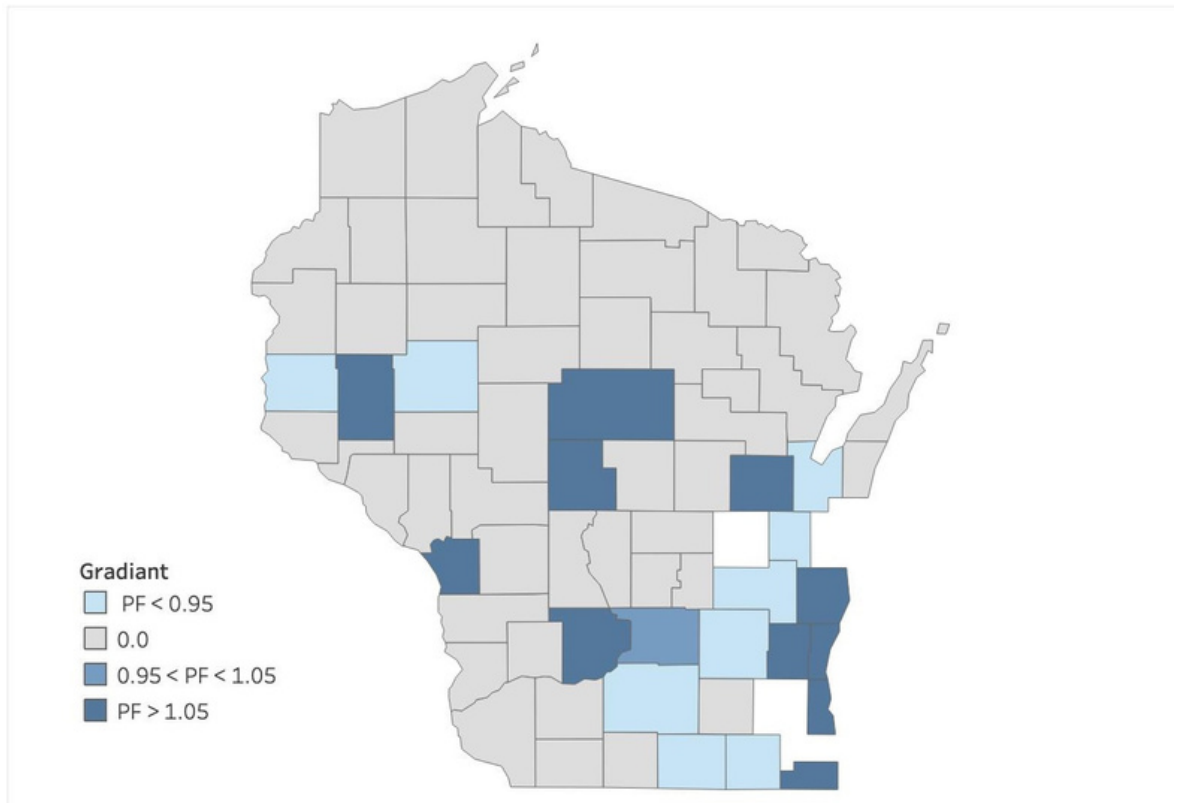




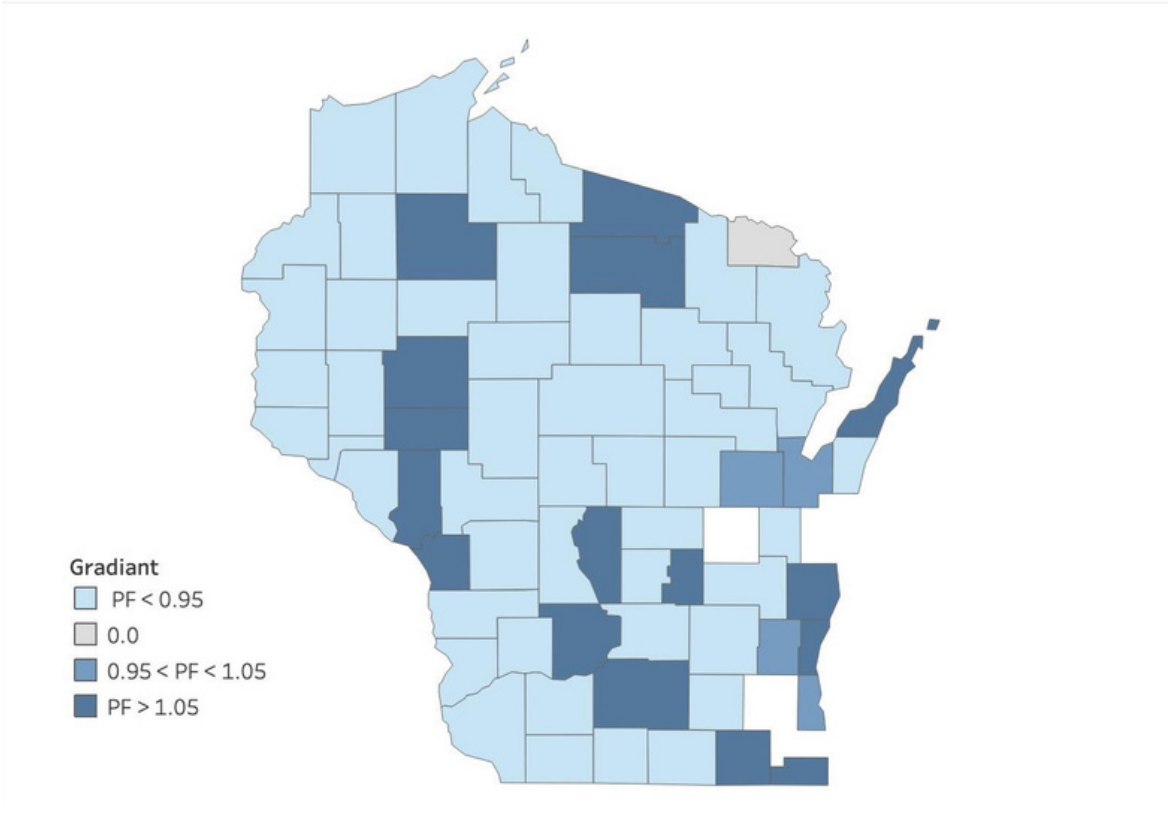
Pull Factor 541 - Professional, Scientific, and Technical Services: 2022



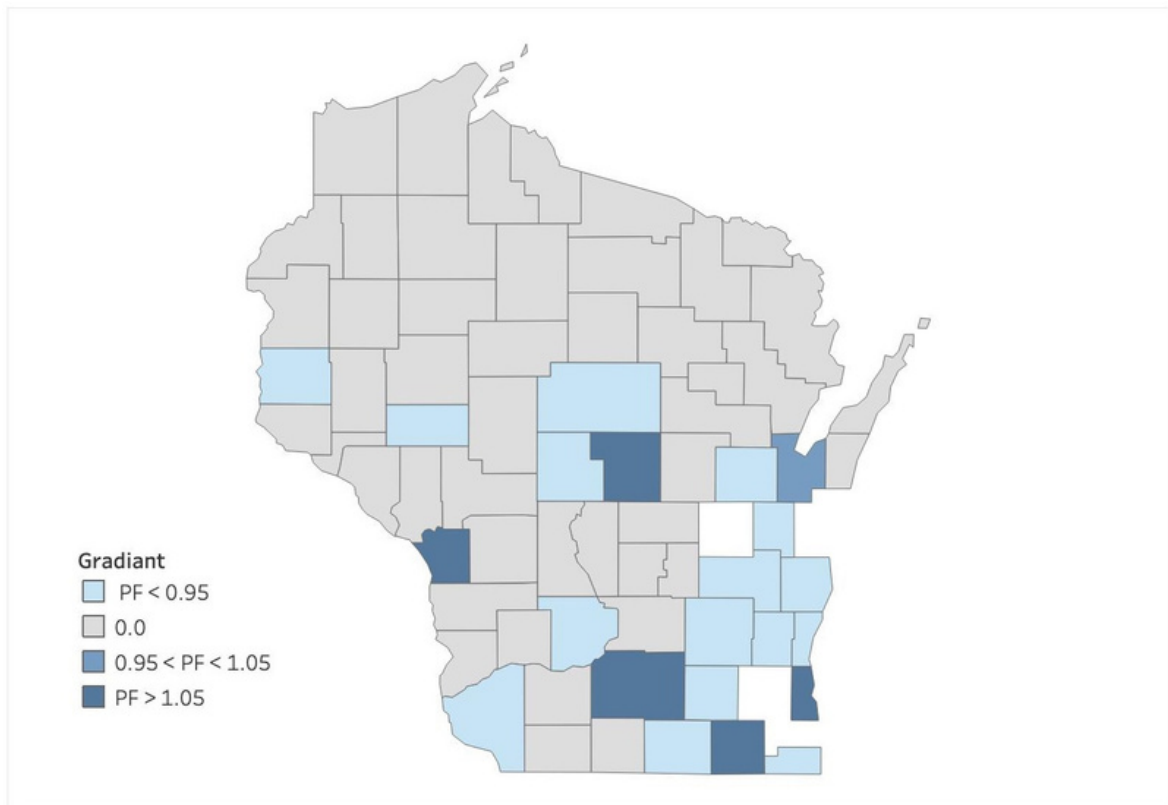
Pull Factor 551 - Management of Companies and Enterprises: 2022



 Pull Factor 561 - Administrative and Support Services: 2022

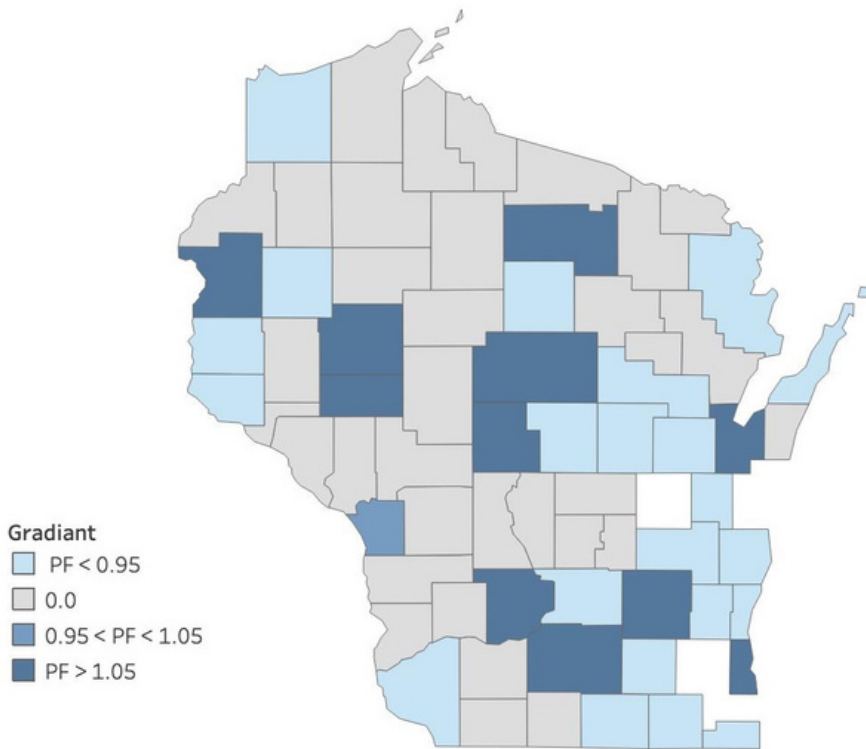


 Pull Factor 611 - Educational Services: 2022

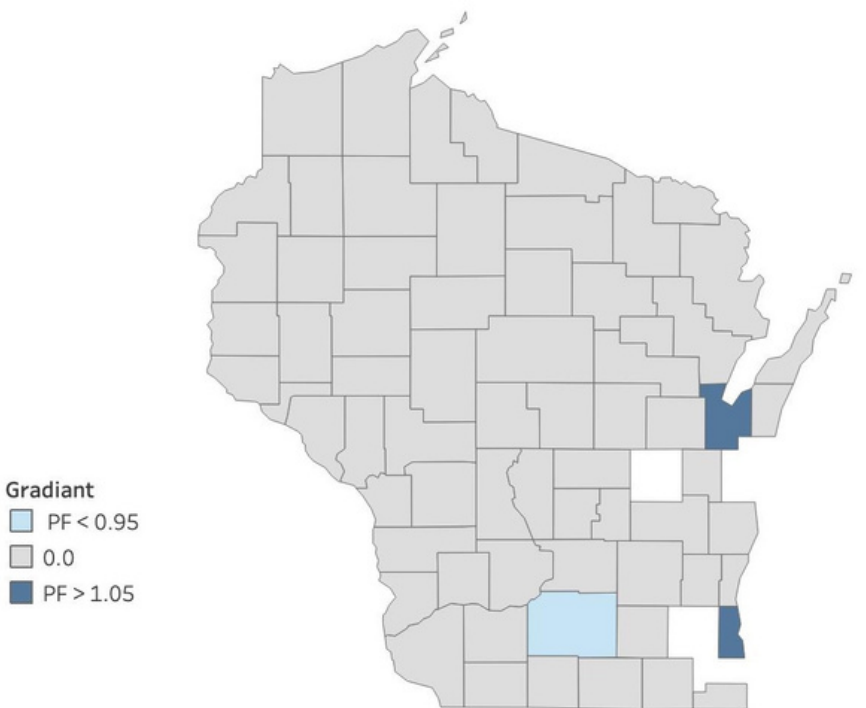




Pull Factor 621 - Ambulatory Health Care Services: 2022

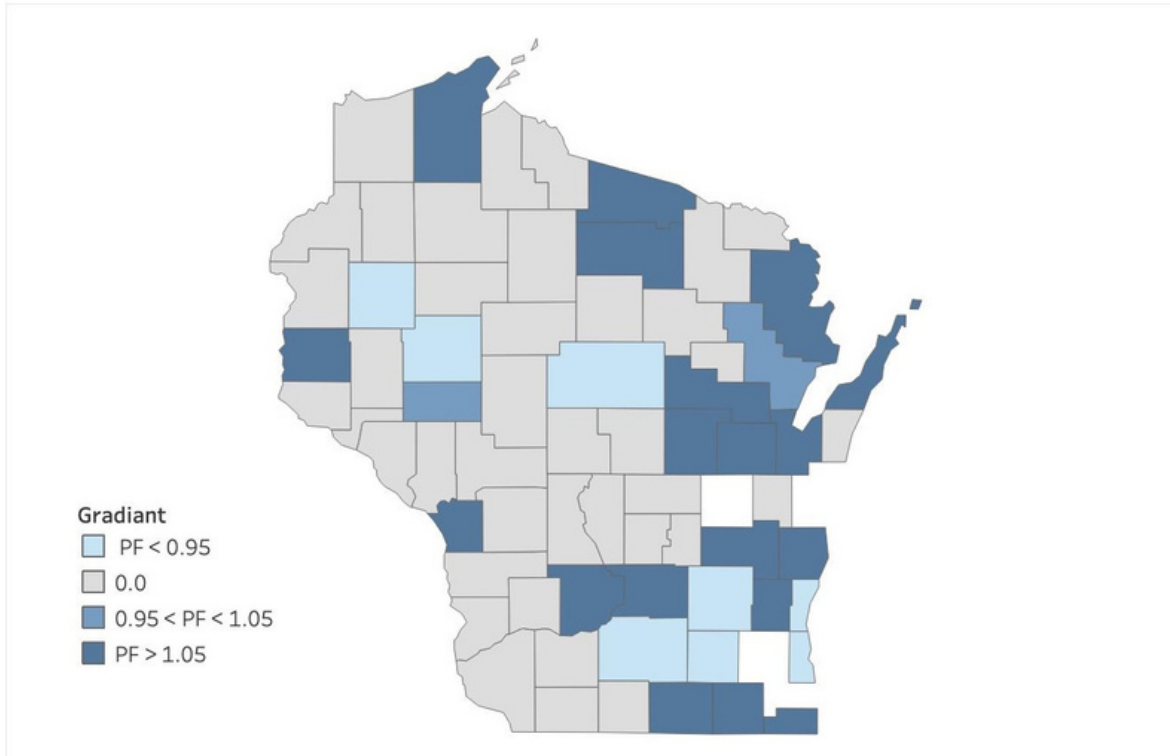


Pull Factor 711 - Performing Arts, Spectator Sports, and Related Industries: 2022

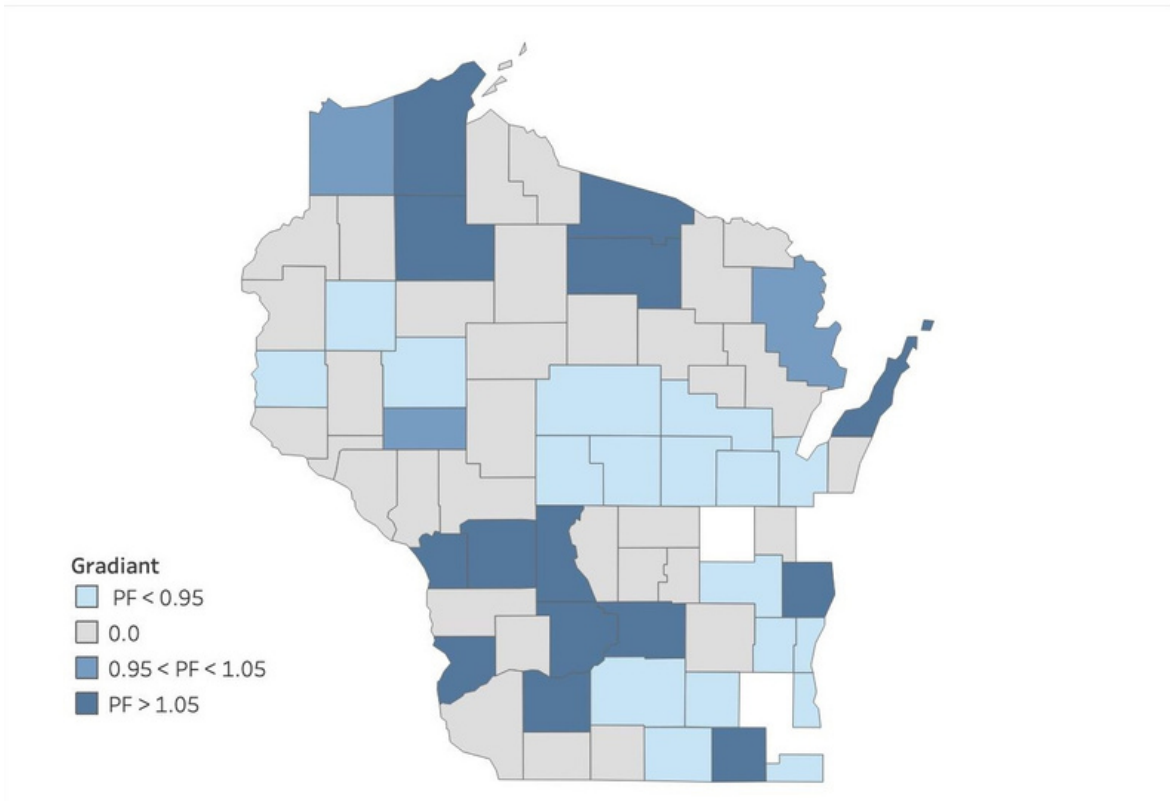




Pull Factor 713 - Amusement, Gambling, and Recreation Industries: 2022

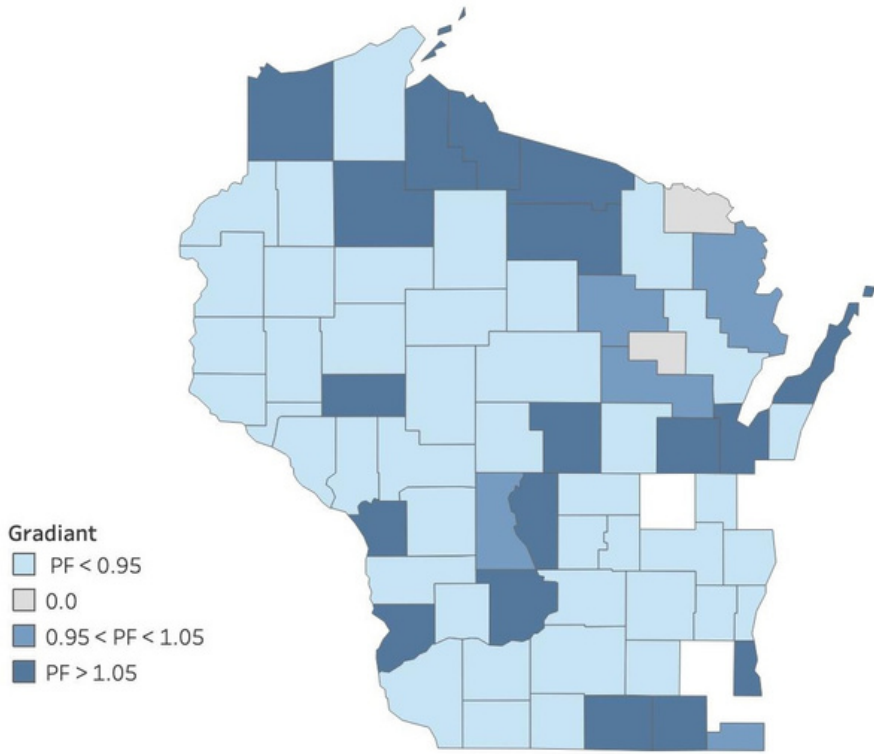


Pull Factor 721 - Accommodation: 2022

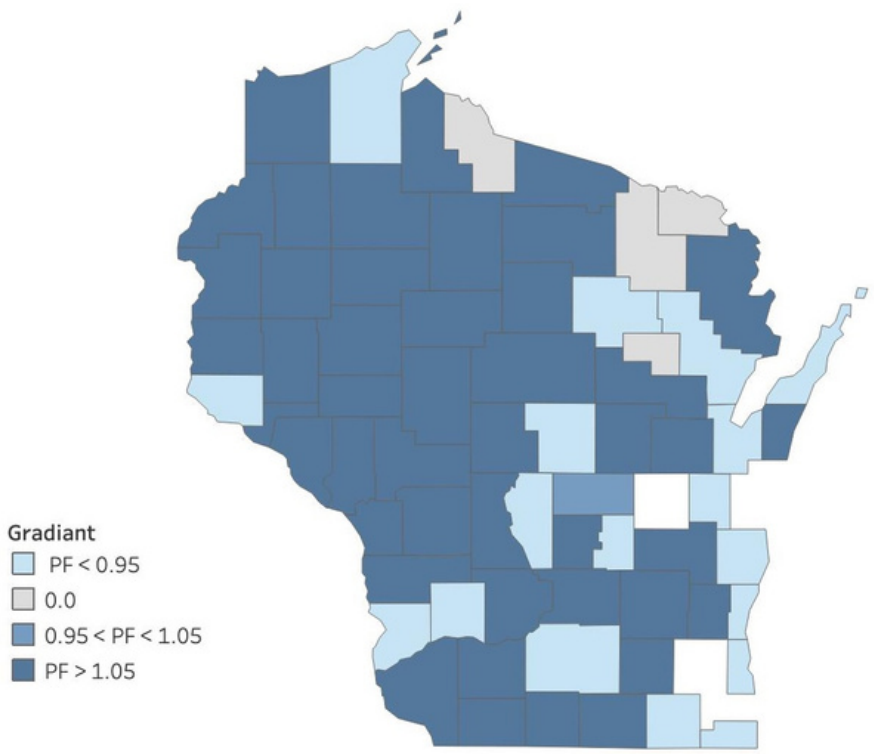




Pull Factor 722 - Food Services and Drinking Places: 2022

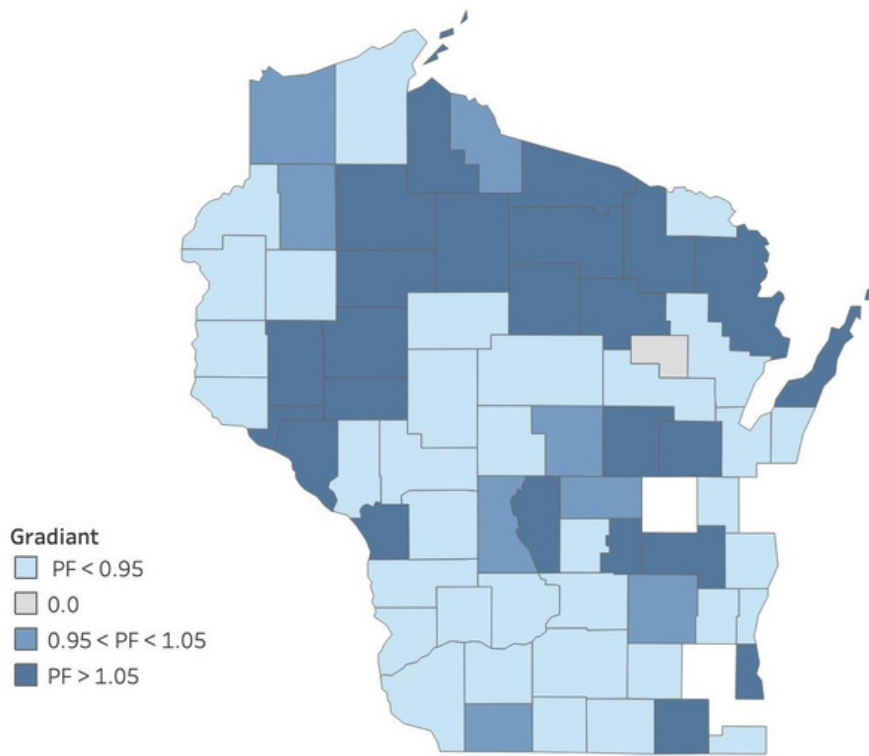


Pull Factor 811 - Repair and Maintenance: 2022





Pull Factor 812 - Personal and Laundry Services: 2022





APPENDIX A: MARKET THRESHOLD ANALYSIS

Demand threshold is the minimum market required to support a particular good or service and still yield a normal profit for the merchant (Deller & Harris 1993; Shonkwiler & Harris 1996; Shaffer, Deller and Marcouiller 2004). The concept of demand threshold is based on the internal economies of the firm and the characteristics of consumer demand and is defined where average cost is just equal to or tangent to average revenue. Because of this, demand thresholds are not absolute, but vary with the type of good or service. Demand thresholds are usually measured in terms of population, rather than quantity sold, by assuming consumers are homogenous in their buying power (income) and tastes.

To better understand this idea first consider the firm side, or supply side, of the market. For illustrative purposes consider two different types of businesses, say a women's clothing store and a household appliance stores. The cost structures that these two different types of businesses face are distinct, which means that the underlying demand structure required to support each type of store is

distinct. If we continue to assume that consumers are homogenous in their buying power (income) and tastes, what distinguishes the differences in the market threshold is population. The business with the higher cost structure will require more people to cover operating costs.

If we look at the demand side and allow for differences in tastes and preferences we can gain additional insights into the differences in required populations. For example, for household appliance stores the frequency of purchases is much lower than for women's clothing. Because of lower purchasing frequency, the population required to support an appliance store will be higher than a women's clothing store. Further, consumers wish to minimize the distance traveled to purchase any good or service. Therefore, frequently purchased items should be available nearby; less frequently purchased items need not be located nearby. Consumers' desire to minimize total travel means that they go to higher-order centers (i.e., cities) only for the goods and services not available in lower-order centers (i.e., towns and villages).

When we consider both the supply of the good, or service, which is reflected in the cost structure of the business combined with frequency of purchases, we have an economic theoretical foundation for different market population thresholds. For Wisconsin, a women's clothing store requires a population of just over 13,000 people whereas an appliance store requires a population of about 33,300 people. A men's clothing store by contrast requires a market population of 80,400 people. While the cost structures for a women's and men's respective clothing stores, the differences in tastes and preferences and frequency of shopping explains these different market population thresholds. These estimates would suggest that we might see a women's clothing store in a smaller community, an appliance store in a medium size community, and a men's clothing store in a larger city.

For retail businesses, the sector that has the lowest population threshold is gasoline stations with convenience stores which require only 2,484 people whereas a luggage and leather goods store requires a population of 723,875 people. As such, we would expect to see gasoline stations with convenience stores in nearly every

For retail businesses, the sector that has the lowest population threshold is gasoline stations with convenience stores which require only 2,484 people whereas a luggage and leather goods store requires a population of 723,875 people. As such, we would expect to see gasoline stations with convenience stores in nearly every Wisconsin community except for the very smallest and luggage and leather goods stores in only the largest communities. For services, full-service restaurants require a population of only 1,150 people (a limited-service restaurant requires only a handful more people at 1,531 and a alcoholic beverage drinking place (bar or tavern) requires 2,210 people), but a computer and office machine repair and maintenance firm requires 75,208 people. Clearly, more specialized businesses that are less frequently utilized require a larger population base than a business that is less specialized and frequented more often. Also note that simple differences in women and men's clothing stores a beauty salon has a population threshold of 3,400 but a barber shop has a threshold of 46,328.

When one considers the Pull Factors and corresponding Surplus/Leakage analysis in light of the insights gained from the population threshold analysis, finer insights can be gained into the market potentials for different retail and service businesses. For example, given the population size of Florence County (4,593) the small Pull Factors and large Leakages becomes understandable given the population threshold estimates.



APPENDIX REFERENCES

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Table A: Wisconsin 2019 Retail Market Population Thresholds

Retail Sector	Threshold	Retail Sector	Threshold
Gasoline Stations with Convenience Stores	2,484	Other Clothing Stores	30,005
Supermarkets and Other Grocery (except Convenience) Stores	6,001	Pet and Pet Supplies Stores	31,473
Automotive Parts and Accessories Stores	7,752	Motorcycle, ATV, and All Other Motor Vehicle Dealers	31,994
Electronic Shopping and Mail-Order Houses	8,191	Household Appliance Stores	33,282
Pharmacies and Drug Stores	9,091	Warehouse Clubs and Supercenters	35,311
All Other General Merchandise Stores	9,604	Cosmetics, Beauty Supplies, and Perfume Stores	35,969
Other Building Material Dealers	10,804	Boat Dealers	37,850
New Car Dealers	10,906	Tobacco Stores	39,938
Sporting Goods Stores	12,065	All Other Health and Personal Care Stores	40,782
Women's Clothing Stores	13,013	Home Centers	42,896
Other Direct Selling Establishments	13,132	Paint and Wallpaper Stores	42,896
Hardware Stores	13,313	Convenience Stores	45,242
Used Car Dealers	13,343	Book Stores	49,496
Used Merchandise Stores	13,723	Department Stores	52,645
Furniture Stores	14,299	Outdoor Power Equipment Stores	53,620
Beer, Wine, and Liquor Stores	14,370	Meat Markets	53,620
Family Clothing Stores	15,567	Clothing Accessories Stores	64,344
Gift, Novelty, and Souvenir Stores	16,086	Sewing, Needlework, and Piece Goods Stores	65,067
All Other Miscellaneous Store Retailers (except Tobacco Stores)	16,405	Recreational Vehicle Dealers	69,771
Shoe Stores	16,499	Children's and Infants' Clothing Stores	69,771
Electronics Stores	17,390	Vending Machine Operators	71,494
Jewelry Stores	18,502	Men's Clothing Stores	80,431
Nursery, Garden Center, and Farm Supply Stores	19,564	Musical Instrument and Supplies Stores	81,563
Floor Covering Stores	21,135	Art Dealers	89,092
Tire Dealers	23,072	Office Supplies and Stationery Stores	90,484
Florists	24,230	Confectionery and Nut Stores	109,264
All Other Home Furnishings Stores	24,643	Baked Goods Stores	123,213
Other Gasoline Stations	26,086	Fruit and Vegetable Markets	193,033
Food (Health) Supplement Stores	26,204	Window Treatment Stores	231,640
All Other Specialty Food Stores	27,841	Manufactured (Mobile) Home Dealers	251,783
Optical Goods Stores	28,955	Luggage and Leather Goods Stores	723,875
Hobby, Toy, and Game Stores	29,247	Fish and Seafood Markets	827,286
Fuel Dealers	29,697	News Dealers and Newsstands	827,286

Table B: Wisconsin 2019 Service Market Population Thresholds

Service Sector	Threshold	Service Sector	Threshold
Full-Service Restaurants	1,150	Offices of Real Estate Appraisers	21,689
Limited-Service Restaurants	1,531	Freight Transportation Arrangement	22,019
Drinking Places (Alcoholic Beverages)	2,120	Other Scientific and Technical Consulting Services	22,621
Insurance Agencies and Brokerages	2,159	School and Employee Bus Transportation	22,710
Offices of Physicians (except Mental Health Specialists)	2,379	Graphic Design Services	23,930
Landscaping Services	2,745	Continuing Care Retirement Communities	24,435
Offices of Dentists	2,923	Vocational Rehabilitation Services	24,748
General Automotive Repair	3,108	Architectural Services	25,738
Offices of Lawyers	3,118	Independent Artists, Writers, and Performers	26,086
Commercial Banking	3,177	Bowling Centers	26,935
Beauty Salons	3,400	Caterers	27,061
Offices of Real Estate Agents and Brokers	3,510	Car Washes	27,061
Child Day Care Services	3,656	Outpatient Mental Health and Substance Abuse Centers	27,576
Janitorial Services	4,924	Solid Waste Collection	28,527
Residential Intellectual and Developmental Disability Facilities	4,975	Data Processing, Hosting, and Related Services	28,811
Hotels (except Casino Hotels) and Motels	5,184	Title Abstract and Settlement Offices	28,811
Offices of Chiropractors	5,407	All Other Professional, Scientific, and Technical Services	30,005
Assisted Living Facilities for the Elderly	5,633	Photography Studios, Portrait	30,640
Temporary Help Services	5,855	Other Activities Related to Credit Intermediation	31,819
Lessors of Residential Buildings and Dwellings	5,989	Advertising Agencies	31,994
Snack and Nonalcoholic Beverage Bars	6,357	Newspaper Publishers	33,669
Services for the Elderly and Persons with Disabilities	6,449	Drycleaning and Laundry Services (except Coin-Operated)	34,065
Portfolio Management	6,618	Real Estate Credit	34,886
Engineering Services	6,664	Nonresidential Property Managers	34,886
Wired Telecommunications Carriers	7,028	Other Services Related to Advertising	35,097
Administrative Management and General Management Consulting Services	7,340	RV (Recreational Vehicle) Parks and Campgrounds	35,311
Custom Computer Programming Services	7,560	Couriers and Express Delivery Services	36,885
Fitness and Recreational Sports Centers	7,560	Software Publishers	37,122
Automotive Body, Paint, and Interior Repair and Maintenance	7,794	HMO Medical Centers	37,604
Offices of Certified Public Accountants	7,858	Septic Tank and Related Services	37,850
Computer Systems Design Services	8,297	Automotive Oil Change and Lubrication Shops	38,099
Veterinary Services	8,417	Savings Institutions	39,128
Residential Property Managers	9,077	Exterminating and Pest Control Services	39,128
Other Individual and Family Services	9,401	Travel Agencies	40,782
Other Accounting Services	9,540	General Medical and Surgical Hospitals	40,782
Food Service Contractors	9,984	Residential Mental Health and Substance Abuse Facilities	40,782
Credit Unions	10,213	Third Party Administration of Insurance and Pension Funds	41,071
All Other Amusement and Recreation Industries	11,267	Testing Laboratories	41,662
Commercial and Industrial Machinery and Equipment (except Automobile)	11,311	Carpet and Upholstery Cleaning Services	42,270
Tax Preparation Services	12,090	Direct Life Insurance Carriers	42,581
Securities Brokerage	12,217	Museums	42,581
Marketing Consulting Services	12,348	Process, Physical Distribution, and Logistics Consulting Services	43,541
Pet Care (except Veterinary) Services	12,700	Lessors of Miniwarehouses and Self-Storage Units	44,546
Office Administrative Services	13,282	Motor Vehicle Towing	45,598
Funeral Homes and Funeral Services	13,788	Ambulance Services	45,598
Offices of Mental Health Practitioners (except Physicians)	14,299	Barber Shops	46,328
Investment Advice	14,441	Special Needs Transportation	46,702
Home Health Care Services	14,587	Surveying and Mapping (except Geophysical) Services	47,081
Nursing Care Facilities (Skilled Nursing Facilities)	15,160	Other Commercial and Industrial Machinery and Equipment Rental and Leasing	47,467
Golf Course and Country Clubs	15,525	Environmental Consulting Services	47,467
Lessors of Nonresidential Buildings (except Miniwarehouses)	15,651	Motion Picture and Video Production	47,860
All Other Outpatient Care Centers	16,499	Research and Development in the Physical, Engineering, and Life Sciences	48,664
Nail Salons	16,834	Coin-Operated Laundries and Drycleaners	48,664
General Warehousing and Storage	17,873	Offices of Physicians, Mental Health Specialists	49,922
Child and Youth Services	17,873	Interior Design Services	51,248
Offices of Optometrists	18,211	Building Inspection Services	52,171
Sports and Recreation Instruction	20,463	Kidney Dialysis Centers	52,171
Fine Arts Schools	20,609	Human Resources Consulting Services	52,645
Consumer Lending	21,369	Freestanding Ambulatory Surgical and Emergency Centers	53,620
Direct Property and Casualty Insurance Carriers	21,528	Other Community Housing Services	53,620

Table B (cont): Wisconsin 2019 Service Market Population Thresholds

Service Sector	Threshold	Service Sector	Threshold
Truck, Utility Trailer, and RV (Recreational Vehicle) Rental and Leasing	54,121	Collection Agencies	125,891
Community Food Services	54,121	Blood and Organ Banks	125,891
Radio Stations	55,152	Bed-and-Breakfast Inns	125,891
Temporary Shelters	55,152	Offices of Physical, Occupational and Speech Therapists, and Audiologists	128,689
Periodical Publishers	55,688	Home and Garden Equipment Repair and Maintenance	128,689
Medical Laboratories	55,688	Other Airport Operations	131,614
Promoters of Performing Arts, Sports, and Similar Events without Facilities	56,223	Diet and Weight Reducing Centers	131,614
Exam Preparation and Tutoring	56,775	Investigation Services	137,881
Other Computer Related Services	57,337	Other Support Activities for Road Transportation	148,487
Executive Search Services	57,910	Research and Development in Biotechnology (except Nanobiotechnology)	148,487
Passenger Car Rental	59,701	Direct Title Insurance Carriers	152,395
Other Activities Related to Real Estate	60,958	Drafting Services	156,514
Recreational and Vacation Camps (except Campgrounds)	60,958	Other Warehousing and Storage	160,861
Public Relations Agencies	61,606	Home Health Equipment Rental	160,861
Professional and Management Development Training	61,606	Other Management Consulting Services	160,861
Financial Transactions Processing, Reserve, and Clearinghouse Activities	63,637	Translation and Interpretation Services	160,861
Facilities Support Services	63,637	Construction, Mining, and Forestry Machinery and Equipment Rental	165,457
Cafeterias, Grill Buffets, and Buffets	65,067	Trust, Fiduciary, and Custody Activities	170,324
Automotive Glass Replacement Shops	65,067	Outdoor Advertising	175,485
Taxi Service	67,337	Research and Development in Nanotechnology	180,969
Mobile Food Services	68,940	Tour Operators	180,969
Motion Picture Theaters (except Drive-Ins)	69,771	Convention and Visitors Bureaus	180,969
Security Guards and Patrol Services	69,771	General Rental Centers	186,806
Automobile Driving Schools	69,771	All Other Legal Services	199,690
Promoters of Performing Arts, Sports, and Similar Events with Facilities	70,622	Industrial Design Services	199,690
Marinas	71,494	Diet and Weight Reducing Centers	199,690
Computer and Office Machine Repair and Maintenance	75,208	Direct Mail Advertising	206,821
Telecommunications Resellers	77,213	Historical Sites	206,821
Employment Placement Agencies	78,257	Book Publishers	222,731
Family Planning Centers	78,257	Zoos and Botanical Gardens	231,640
Internet Publishing and Broadcasting and Web Search Portals	79,329	Radio Networks	241,292
Computer Facilities Management Services	79,329	Television Broadcasting	241,292
Diagnostic Imaging Centers	79,329	Scenic and Sightseeing Transportation, Water	251,783
Security Systems Services (except Locksmiths)	80,431	Cosmetology and Barber Schools	251,783
Local Messengers and Local Delivery	82,729	Charter Bus Industry	275,762
Video Tape and Disc Rental	83,928	Consumer Electronics and Appliances Rental	275,762
Payroll Services	85,162	Consumer Electronics Repair and Maintenance	275,762
Refrigerated Warehousing and Storage	86,433	Emergency and Other Relief Services	289,550
Offices of Podiatrists	86,433	Armored Car Services	321,722
Theater Companies and Dinner Theaters	86,433	Skiing Facilities	321,722
Amusement Arcades	86,433	Teleproduction and Other Postproduction Services	361,938
Professional Employer Organizations	87,742	Nature Parks and Other Similar Institutions	361,938
Recreational Goods Rental	89,092	Communication Equipment Repair and Maintenance	361,938
Appliance Repair and Maintenance	91,921	Directory and Mailing List Publishers	386,067
Convention and Trade Show Organizers	94,934	All Other Transit and Ground Passenger Transportation	445,462
Commercial Photography	101,596	Farm Product Warehousing and Storage	445,462
Other Electronic and Precision Equipment Repair and Maintenance	103,411	Formal Wear and Costume Rental	445,462
Telemarketing Bureaus and Other Contact Centers	105,291	Research and Development in the Social Sciences and Humanities	445,462
Locksmiths	107,241	Repossession Services	445,462
Marketing Research and Public Opinion Polling	115,820	Other Gambling Industries	445,462
Other Support Activities for Air Transportation	118,184	Scenic and Sightseeing Transportation, Land	482,583
Private Mail Centers	118,184	Commodity Contracts Brokerage	482,583
Limousine Service	120,646	Psychiatric and Substance Abuse Hospitals	482,583
Investment Banking and Securities Dealing	120,646	Footwear and Leather Goods Repair	482,583
Sales Financing	123,213	Sound Recording Studios	526,455
Mortgage and Nonmortgage Loan Brokers	123,213	Media Representatives	579,100
Claims Adjusting	123,213	Libraries and Archives	643,444
Landscape Architectural Services	123,213	Office Machinery and Equipment Rental and Leasing	643,444
Reupholstery and Furniture Repair	123,213	Casino Hotels	723,875
Document Preparation Services	125,891	Music Publishers	827,286