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The Costs and Benefits of Recreational Cannabis Legalization in Illinois: County Level Analysis

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Abstract

Illinois legalized recreational marijuana in January 2020. This paper examines the ‘value’ of cannabis to Illinois counties. The construct ‘value’ was defined as $\frac{\text{Benefits}}{\text{Costs}}$. The numerator of the ‘value’ equation, benefits, was measured using county tax revenues. Costs, the denominator of the equation, were measured as healthcare costs for combatting cannabis use disorder among the population. Results of data analysis suggest that recreational cannabis legalization doesn’t provide ‘value’ for 35% of the metro counties and one-in-three of the nonmetro counties.

Introduction

Illinois was the 11th state to legalize recreational marijuana². The state enacted the policy with social-wellness in mind³, for example, that cannabis has health benefits, causes less harm than alcohol, and legalization of recreational cannabis raises tax revenues⁴. However, our knowledge of the health benefits caused by cannabis use is incomplete. For example, women of reproductive age who use cannabis during their pregnancies may give birth to babies of low birth-weight who may experience behavioral problems in

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² Policy tends to diffuse through states and regions, much like innovation; see, Grossback, L. J., Nicholson-Crotty, S., & Peterson, D. A. (2004). Ideology and learning in policy diffusion. *American Politics Research*, 32(5), 521-545.

³ This argument is based on the premise that the aim of policy is economic efficiency or social well-being.

⁴ Hall, W. (2022). The costs and benefits of cannabis control policies. *Dialogues in clinical neuroscience*, 22, 281-287.

childhood; the qualifier (may) highlights the uncertainty of the research findings, presence of confounding variables preclude inferring causality between cannabis use and health⁵. There is some evidence that regular cannabis use is associated with poorer cognitive performance in young people⁶. Cannabis users believe that the drug (tetrahydrocannabinol (THC)) helps them to relax, reduce anxiety, and enjoy nature, music, and food⁷. There is little evidence that cannabis use reduces chronic pain, the most common reason for medical use in the nation⁸. Overall, there is evidence that THC causes more harm than good to one's health; for instance, 24 people need to receive cannabis for one to benefit whereas one in six suffer side effects from cannabis use⁹.

What is the 'value' of cannabis for Illinois' counties? This paper addresses this

⁵ NASEM: The health effects of cannabis and cannabinoids: The current state of evidence and recommendations for research. Washington, DC: National Academies Press for the National Academies of Sciences, Engineering, and Medicine, 2017.

⁶ Scott, J. C., Slomiak, S. T., Jones, J. D., Rosen, A. F., Moore, T. M., & Gur, R. C. (2018). Association of cannabis with cognitive functioning in adolescents and young adults: a systematic review and meta-analysis. *JAMA psychiatry*, 75(6), 585-595.

⁷ Hall, Wayne, and Rosalie Liccardo Pacula. *Cannabis use and dependence: public health and public policy*. Cambridge university press, 2003.

⁸ Mücke, M., Phillips, T., Radbruch, L., Petzke, F., & Häuser, W. (2018). Cannabis-based medicines for chronic neuropathic pain in adults. *Cochrane database of systematic reviews*, (3).

⁹ Stockings, E., Campbell, G., Hall, W. D., Nielsen, S., Zagic, D., Rahman, R., ... & Degenhardt, L. (2018). Cannabis and cannabinoids for the treatment of people with chronic noncancer pain conditions: a systematic review and meta-analysis of controlled and observational studies. *Pain*, 159(10), 1932-1954.

question using data from a variety of sources.

The Value Construct

In microeconomics, value is utility or satisfaction; for example, recreational cannabis legalization (RCL) would generate tax revenues for state / local governments which would be 'valued' by the lawmakers. In the field of marketing strategy, the value of a concept is often assessed using the value-in-use (VIU) approach¹⁰. The approach, translated to the RCL problem, could be defined as the maximum cost that a community is willing to incur for the RCL.

To arrive at VIU for cannabis, a complete list of costs associated with RCL should be constructed. These cost elements would be, for example, healthcare costs to treat cannabis use disorder and motor vehicle accidents caused by cannabis use. If costs exceed revenues, then RCL is of little or no value. In other words,

$$Value_{RCL} = \frac{RCL \text{ Revenues}}{RCL \text{ Costs}} > 1. \quad (EQ1)$$

Methodology

Cannabis tax revenues for Illinois counties had to be estimated using four types of information: cannabis sales figures, county tax rates, population, and cannabis usage rate. Data on cannabis sales at the state level were sourced from the cannabis regulation office¹¹; monthly sales

¹⁰ Adam Smith coined the term "value in use" to discuss consumer utility; see the "Diamond-Water paradox" in his book, *Wealth of Nations*.

¹¹ <https://cannabis.illinois.gov/research-and-data/sales-figures.html>

figures for both medical use and adult use cannabis for January-August, 2023 were sourced, annual compound growth rates (ACGRs) for the eight months were

computed, and the results applied to estimate September 2023-December 2023 monthly sales (Table 1).

Table 1: Monthly Cannabis Sales, Actuals, ACGRs, and Estimates for 2023

Month	Cannabis Sales, 2023	
	Adult / Rec Use	Medical Use
January	127,927,930	27,621,052
February	120,481,623	26,652,043
March	134,782,515	29,018,898
April	131,990,463	28,034,746
May	132,763,359	27,461,290
June	136,394,336	27,028,652
July	140,031,713	26,844,798
August	139,211,239	26,455,398
ACGR	1.21%	-0.62%
September, Estimate	140,930,528	27,621,052
October, Estimate	134,343,135	26,652,043
November, Estimate	152,118,904	29,018,898
December, Estimate	150,781,183	28,034,746

County cannabis tax rates were obtained from the “My Tax Illinois” website¹². Appendix 1 shows the tax rates for each of the metro / nonmetro counties. County population data, for adults ages 21 and above, were sourced from ACS, 2017-2021, five-year estimates; and the number of cannabis users, for both metro and nonmetro, were extracted from the National Survey on Drug Use and Health, 2021.

The operational definition of tax revenues at the county level can be gleaned from the equation:

$$TaxRev_i = \frac{Pop_i}{Pop_k} \times Sales_k \times TaxRate_i \times UseRate_{km},$$

where, county i ranges from 1-102; k is the region, metro and nonmetro; m is use purpose, medical or recreational.

The operational definition of costs, the denominator of EQ1, is:

$$RCLCosts_i = AddictedPop_i \times Cost\ of\ Treatment,$$

¹² https://mytax.illinois.gov/_/#2.

where, i is the county; 10% of the “ever used marijuana” population in county i was the operational definition for the “addicted population” variable. The average cost of treatment for cannabis addiction in a hospital setting is estimated at \$1,713¹³.

Findings

Cannabis Tax Revenues

Table 2 shows tax-revenue estimates for metro / nonmetro counties, extreme cases are shown. Appendix 2 contains tax revenue data for each of the 102 counties.

Table 2: Cannabis Tax Estimates for Illinois Counties, 2023; Extreme Observations

(i) Metro Region

Extreme Observations		Extreme Observations	
Metro County	Lowest	Metro County	Highest
Alexander	\$70,612	Kane	\$7,125,979
Calhoun	\$72,340	Will	\$9,603,600
Stark	\$82,467	Lake	\$9,737,057
Menard	\$135,914	DuPage	\$13,314,877
Mercer	\$153,756	Cook	\$85,384,003

(ii) Nonmetro Region

Extreme Observations		Extreme Observations	
Nonmetro County	Lowest	Nonmetro County	Highest
Pope	\$34,138	Ogle	\$679,017
Pulaski	\$44,823	Knox	\$765,483
Hardin	\$45,511	Whiteside	\$812,918
Scot	\$48,161	Adams	\$892,242
Gallatin	\$76,129	LaSalle	\$1,399,914

The typical or median cannabis tax revenue for the metro region is \$991,046. The median tax revenue for the nonmetro is \$209,551, one-fifth of the metro value. In terms of the value equation (EQ1), county tax revenue is the numerator.

¹³ <https://www.healthaffairs.org/doi/10.1377/hlthaff.2015.0618>. The 2016 figure, \$1,057, was weighted by the retail price index to arrive at the 2023 cost estimate.

Costs of Cannabis

The VIU approach requires that all costs related to cannabis use be included in the denominator of the ‘value’ equation. However, for the purposes of this paper, only the healthcare costs of the population were studied; lack of data on other costs related to cannabis use such as road traffic crashes precluded their use.

Research indicates that 10% of the people who have ever smoked marijuana become addicted to the drug¹⁴. Table 3 profiles the respondents who have ever used

marijuana or hashish by the metro and the nonmetro geographies.

A typical metro respondent who has ever used marijuana is a 17-year-old White male, who is unemployed, and has a family income of \$50,000 to \$74,999 per year. A typical nonmetro respondent who has ever used marijuana is a 16-year-old male, from the “other” race (for example, Pacific Islander) with a family income of less than \$20,000.

Table 3: Profile of Respondents Who Have Ever Used Marijuana or Hashish

Variable	Metro	Nonmetro
Gender:		
□ Male	53%	51%
□ Female	48%	49%
Race:		
□ White	53%	43%
□ Black	44%	34%
□ Hispanic	34%	31%
□ Other	32%	52%
Employment Status:		
□ Employed FT	55%	50%
□ Employed PT	53%	43%
□ Unemployed	56%	62%
Family Income:		
□ < \$20,000	45%	44%
□ \$20,000 to \$49,999	44%	43%
□ \$50,000 to \$74,999	49%	37%
□ ≥ \$75,000	47%	42%

Note: Tabulated from the National Survey on Drug Use and Health, 2021. Weighted response numbers for metro = 216million and for nonmetro = 37.68million.

¹⁴ <https://www.cdc.gov/marijuana/health-effects/addiction.html>.

Table 4 shows the distribution of healthcare costs for the metro and the nonmetro counties, extreme cases are shown. In the metro, the median cost of healthcare to treat cannabis addiction is \$797,830. The same statistic for the

nonmetro is \$173,551. Calhoun County in the metro and Hardin County in the nonmetro have the lowest cost. Appendix 3 contains cost data for all the counties.

Table 4: Healthcare Costs, Extremes

(i) Metro Region

Extreme Observations		Extreme Observations	
Metro County	Lowest	Metro County	Highest
Calhoun	\$46,936	Kane	\$6,668,538
Alexander	\$52,075	Will	\$9,063,826
Stark	\$57,557	Lake	\$9,583,721
Marshall	\$103,808	DuPage	\$10,604,155
Menard	\$126,248	Cook	\$54,964,517

(ii) Nonmetro Region

Extreme Observations		Extreme Observations	
Nonmetro County	Lowest	Nonmetro County	Highest
Hardin	\$27,237	Whiteside	\$593,383
Pope	\$31,348	Ogle	\$614,282
Brown	\$39,913	Adams	\$655,223
Scott	\$52,589	Coles	\$663,959
Henderson	\$54,645	LaSalle	\$1,173,405

Figure 1 shows the distribution of ‘value’ of cannabis for the metro counties; the median is 1.185, but the distribution is skewed to the left, -.12; it indicates that the mean is less than the median ($\mu = 1.13$; see the Box plot) – a large proportion of counties do not gain value from RCL; Grundy County benefits the least, RCL value = .67. The distribution of Figure 1 is not only non-normal, but also has a lighter tail than a normal distribution, kurtosis = -1.13, range or variability of the observations are limited.

Figure 1: Cannabis Value for Metro Counties

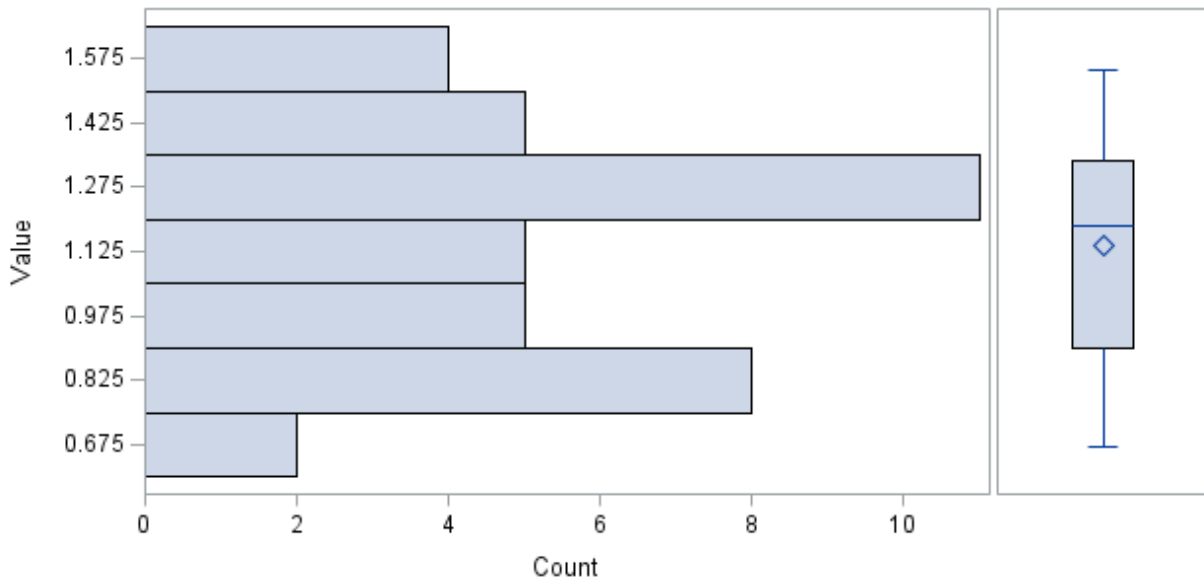
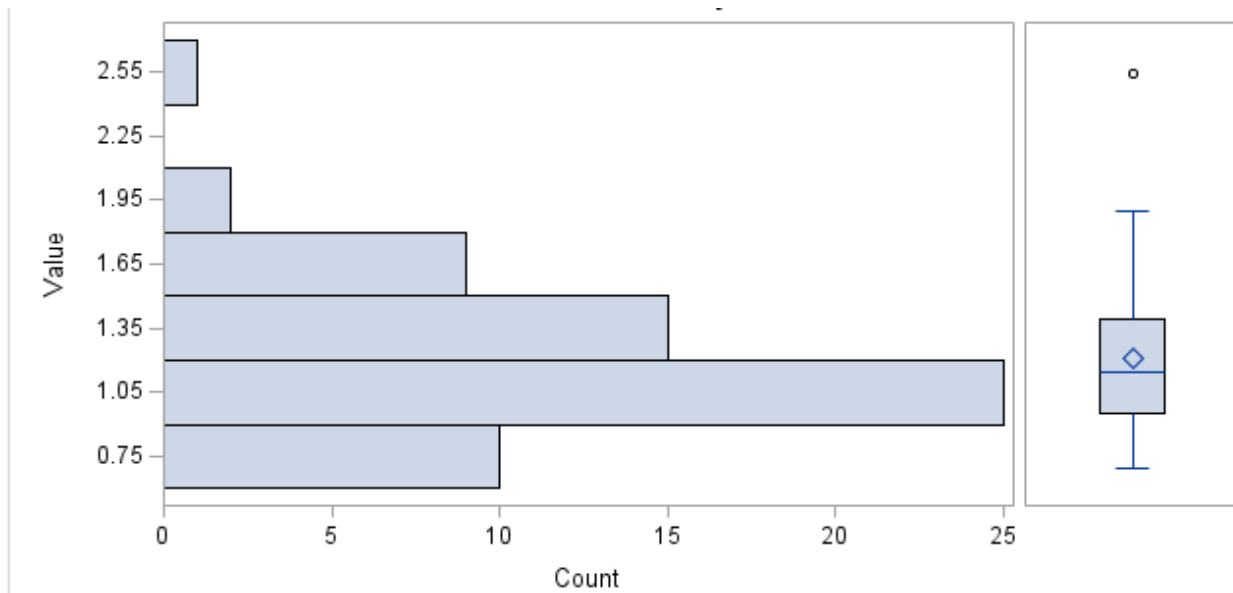


Figure 2: Cannabis Value for Nonmetro Counties



In contrast to the metro, nonmetro has a wider distribution of value from RCL (Figure 2); the range statistics for the regions are: metro = .88 and nonmetro = 1.85. Brown County in the nonmetro

gains the most value from RCL, 2.54. Clay County posts the least value, 0.69. Appendix 4 lists the RCL values for all the counties.

Summary and Conclusion

This research addresses the question, what is the value of cannabis for Illinois counties. The construct 'value' is operationally defined as $\frac{Benefits}{Costs}$. If costs exceed benefits, then recreational cannabis legalization (RCL) is of little or no value. In other words,

$$Value_{RCL} = \frac{RCL\ Benefits}{RCL\ Costs} > 1.$$

For the purposes of this research, benefits are defined as cannabis tax revenues. Since data on county cannabis taxes are difficult to collate, monthly cannabis sales data for the state were used to deduce county tax revenues. The variable 'costs' were operationally defined as healthcare costs to treat cannabis use disorder among the population.

Results of data analysis suggest that recreational cannabis legalization doesn't provide 'value' for 35% of the metro counties and one-in-three of the nonmetro counties. Grundy County in the metro and Clay County in the nonmetro post the lowest 'value'.

This empirical analysis of 'value' offers a partial view of reality; elements of public health impacts such as cognitive impairment among adolescents, road traffic crashes, etc. were not considered in the 'value' equation. The main hurdle for a thorough cost-benefit analysis of RCL is lack of data. Meanwhile, the marijuana industry is growing in strength; it has created 30,000 new jobs since legalization of the drug in 2020¹⁵. By the time we have

the data to assess the effects of RCL, it will be more difficult to regulate the industry that provides tax revenues to local governments, creates jobs, and that has the financial power to lobby for policies that would support the industry.

¹⁵ <https://www.marijuanamoment.net/illinois-governor-says-marijuana-legalization-has-created-over-30000-jobs-in-the-state-since-2020/>.

Appendix 1: Cannabis Tax Rates

(i) Metro Counties

County	Medical Cannabis Tax Rate	Adult Use Cannabis Tax Rate	County Cannabis Tax Rate
Alexander	1	10	3.75
Bond	1	11	3.75
Boone	1	7.75	
Calhoun	1	11.75	3.75
Champaign	1	11.25	3.75
Clinton	1	6.25	
Cook	2.25	12	3
De Witt	1	10	3.75
DeKalb	1	10	3.75
DuPage	1.75	10.75	3.75
Ford	1	10	3.75
Grundy	1	6.25	
Henry	1	11.5	3.75
Jackson	1	8.75	1.5
Jersey	1	8	
Kane	1.75	10.75	3.75
Kankakee	1	10	3.75
Kendall	1	11	3.75
Lake	1	10.75	3.75
Macon	1	7.75	
Macoupin	1	11	3.75
Madison	1	6.6	
Marshall	1	10	3.75
McHenry	1	10.75	3.75
McLean	1	10	3.75

Appendix 1, Cont'd

County	Medical Cannabis Tax Rate	Adult Use Cannabis Tax Rate	County Cannabis Tax Rate
Menard	1	8.25	
Mercer	1	7.25	
Monroe	1	11.25	3.75
Peoria	1	11	3.75
Piatt	1	7.25	
Rock Island	1	11	3.75
Sangamon	1	11	3.75
St. Clair	1	10.35	3.75
Stark	1	11.25	3.75
Tazewell	1	10.5	3.75
Vermilion	1	10.25	3.75
Will	1.75	10.75	3.75
Williamson	1	11	3.75
Winnebago	1	11.5	3.75
Woodford	1	12	3.75

(ii) Nonmetro Counties

County	Medical Cannabis Tax Rate	Adult Use Cannabis Tax Rate	County Cannabis Tax Rate
Adams	1	10.25	3.75
Brown	1	11.25	3.75
Bureau	1	11	3.75
Carroll	1	10.25	3.75
Cass	1	12	3.75
Christian	1	11	3.75
Clark	1	7.25	
Clay	1	6.75	
Coles	1	7.25	
Crawford	1	10	3.75
Cumberland	1	11	3.75
Douglas	1	7.25	
Edgar	1	8.25	
Edwards	1	11	3.75
Effingham	1	6.5	

Appendix 1, Cont'd

County	Medical Cannabis Tax Rate	Adult Use Cannabis Tax Rate	County Cannabis Tax Rate
Fayette	1	7.25	
Franklin	1	8.25	0
Fulton	1	11.5	3.75
Gallatin	1	11	3.75
Greene	1	7.25	
Hamilton	1	8.25	
Hancock	1	6.25	
Hardin	1	8.25	
Henderson	1	11	3.75
Iroquois	1	10.25	3.75
Jasper	1	7.25	
Jefferson	1	10.5	3.75
Jo Daviess	1	11	3.75
Johnson	1	7.75	
Knox	1	11.5	3.75
LaSalle	1	9.5	3
Lawrence	1	11	3.75
Lee	1	11.5	3.75
Livingston	1	11	3.75
Logan	1	8.25	
Marion	1	7.5	
Mason	1	7.25	
Massac	1	10	3.75
McDonough	1	11.75	3.75
Montgomery	1	11	3.75
Morgan	1	11	3.75
Moultrie	1	6.75	
Ogle	1	10	3.75
Perry	1	7.75	
Pike	1	7.75	
Pope	1	6.25	
Pulaski	1	6.25	
Putnam	1	10	3.75
Randolph	1	7.25	
Richland	1	7.75	
Saline	1	11.75	3.75
Schuyler	1	8.25	0
Scott	1	7.25	
Shelby	1	7.25	
Stephenson	1	10.5	3.75
Union	1	12.25	3.75
Wabash	1	7.25	
Warren	1	11	3.75
Washington	1	6.25	
Wayne	1	7	
White	1	7.25	
Whiteside	1	11	3.75

Appendix 2: Estimated Tax Revenues, 2023

(i) Metro

County	Estimated Tax Revenues		
	Medical Use	Non-Medical Use	Total
Alexander	1,362	69,250	70,612
Bond	4,369	244,376	248,745
Boone	13,052	514,315	527,366
Calhoun	1,191	71,149	72,340
Champaign	49,442	2,828,173	2,877,615
Clinton	9,610	305,393	315,003
Cook	3,036,634	82,347,369	85,384,003
De Witt	4,018	204,293	208,310
DeKalb	24,254	1,233,248	1,257,502
DuPage	413,068	12,901,809	13,314,877
Ford	3,452	175,544	178,997
Grundy	12,842	408,089	420,931
Henry	12,633	738,713	751,346
Jackson	13,394	595,884	609,277
Jersey	5,555	225,946	231,501
Kane	221,070	6,904,909	7,125,979
Kankakee	26,809	1,363,138	1,389,947
Kendall	30,342	1,697,046	1,727,388
Lake	174,939	9,562,118	9,737,057
Macon	26,278	1,035,519	1,061,797
Macoupin	11,619	649,881	661,501
Madison	67,937	2,279,862	2,347,799
Marshall	3,091	157,171	160,262
McHenry	78,024	4,264,748	4,342,772

Appendix 2, Cont'd

County	Medical Use	Estimated Tax Revenues	
		Non-Medical Use	Total
McLean	40,971	2,083,235	2,124,206
Menard	3,165	132,750	135,914
Mercer	4,061	149,695	153,756
Monroe	8,948	511,825	520,773
Peoria	45,158	2,525,752	2,570,910
Piatt	4,270	157,394	161,663
Rock Island	36,476	2,040,113	2,076,589
Sangamon	50,106	2,802,480	2,852,586
St. Clair	64,680	3,403,818	3,468,497
Stark	1,417	81,050	82,467
Tazewell	33,675	1,797,847	1,831,522
Vermilion	18,673	973,171	991,844
Will	297,933	9,305,667	9,603,600
Williamson	17,394	972,853	990,247
Winnebago	71,657	4,190,030	4,261,688
Woodford	9,506	580,025	589,531

(ii) Nonmetro Counties

County	Medical Use	Estimated Tax Revenues	
		Non-Medical Use	Total
Adams	16,798	875,444	892,242
Brown	1,741	99,579	101,320
Bureau	8,654	484,006	492,659
Carroll	4,114	214,430	218,545
Cass	3,227	196,926	200,153
Christian	8,849	494,918	503,767
Clark	3,952	145,681	149,633
Clay	3,374	115,805	119,179
Coles	12,103	446,160	458,263
Crawford	5,011	254,767	259,778
Cumberland	2,681	149,949	152,630
Douglas	4,786	176,425	181,211
Edgar	4,524	189,766	194,289
Edwards	1,587	88,740	90,326
Effingham	8,688	287,150	295,838

Appendix 2, Cont'd

County	Estimated Tax Revenues		
	Medical Use	Non-Medical Use	Total
Fayette	5,570	205,333	210,904
Franklin	9,766	409,660	419,426
Fulton	9,034	528,260	537,295
Gallatin	1,337	74,792	76,129
Greene	3,164	116,621	119,784
Hamilton	2,076	87,102	89,178
Hancock	4,641	147,495	152,136
Hardin	1,060	44,452	45,511
Henderson	1,768	98,884	100,652
Iroquois	7,045	367,188	374,234
Jasper	2,359	86,978	89,337
Jefferson	9,568	510,841	520,410
Jo Daviess	5,931	331,751	337,683
Johnson	3,522	138,768	142,289
Knox	12,871	752,612	765,483
LaSalle	28,394	1,371,520	1,399,914
Lawrence	4,138	231,446	235,584
Lee	9,056	529,526	538,582
Livingston	9,215	515,379	524,593
Logan	7,322	307,126	314,448
Marion	9,520	363,040	372,560
Mason	3,451	127,206	130,657
Massac	3,671	186,670	190,341
McDonough	6,773	404,629	411,401
Montgomery	7,518	420,472	427,990
Morgan	8,489	474,822	483,312
Moultrie	3,592	123,291	126,883
Ogle	13,097	665,920	679,017
Perry	5,620	221,444	227,063
Pike	3,781	148,987	152,768
Pope	1,041	33,097	34,138
Pulaski	1,367	43,456	44,823
Putnam	1,490	75,765	77,255
Randolph	8,131	299,719	307,849
Richland	3,979	156,797	160,776
Saline	6,186	369,557	375,743
Schuyler	1,867	78,327	80,194
Scott	1,272	46,889	48,161
Shelby	5,499	202,700	208,198
Stephenson	11,618	620,250	631,867
Union	4,472	278,564	283,036
Wabash	2,940	108,365	111,304
Warren	4,150	232,118	236,268
Washington	3,595	114,256	117,852
Wayne	4,123	146,758	150,881
White	3,594	132,487	136,081
Whiteside	14,279	798,639	812,918

Appendix 3: Estimated Healthcare Costs, 2023

Metro County	Costs	Nonmetro County	Costs
Alexander	52075.2	Adams	655222.5
Bond	203675.7	Brown	39912.9
Boone	751664.4	Bureau	347739
Calhoun	46936.2	Carroll	156910.8
Champaign	3633101.7	Cass	143720.7
Clinton	361785.6	Christian	329238.6
Cook	54964517.1	Clark	168730.5
De Witt	163248.9	Clay	144063.3
DeKalb	1517032.8	Coles	663958.8
DuPage	10604155.2	Crawford	172499.1
Ford	157424.7	Cumberland	103122.6
Grundy	629013.6	Douglas	237250.5
Henry	532571.7	Edgar	173184.3
Jackson	808878.6	Edwards	68691.3
Jersey	260376	Effingham	354591
Kane	6668537.7	Fayette	211041.6
Kankakee	1408771.2	Franklin	396045.6
Kendall	1782547.8	Fulton	325298.7
Lake	9583721.1	Gallatin	55501.2
Macon	1155418.5	Greene	127447.2
Macoupin	497455.2	Hamilton	68862.6
Madison	2833130.7	Hancock	173698.2
Marshall	103807.8	Hardin	27236.7
McHenry	3769113.9	Henderson	54644.7
McLean	2655321.3	Iroquois	315192
Menard	126248.1	Jasper	97127.1
Mercer	177124.2	Jefferson	376346.1
Monroe	360757.8	Jo Daviess	209328.6
Peoria	2042067.3	Johnson	121280.4
Piatt	178323.3	Knox	584989.5
Rock Island	1608678.3	LaSalle	1173405
Sangamon	2122578.3	Lawrence	123678.6
St. Clair	2801440.2	Lee	325641.3
Stark	57556.8	Livingston	396388.2
Tazewell	1397636.7	Logan	326326.5
Vermilion	786780.9	Marion	391591.8
Will	9063825.6	Mason	132072.3
Williamson	641175.9	Massac	136183.5
Winnebago	3165795.3	McDonough	517839.9
Woodford	470732.4	Montgomery	255750.9

Appendix 3, Cont'd

<u>Nonmetro County</u>	<u>Costs</u>
Morgan	411462.6
Moultrie	171471.3
Ogle	614281.8
Perry	215324.1
Pike	154341.3
Pope	31347.9
Pulaski	64066.2
Putnam	56529
Randolph	312451.2
Richland	165133.2
Saline	228514.2
Schuyler	72802.5
Scott	52589.1
Shelby	202647.9
Stephenson	461653.5
Union	180207.6
Wabash	105006.9
Warren	250954.5
Washington	152114.4
Wayne	166503.6
White	133271.4
Whiteside	593383.2

Appendix 4: Value Scores, $\frac{\text{Benefits}}{\text{Costs}}$

Metro County	Value	Nonmetro County	Value
Alexander	1.36	Adams	1.36
Bond	1.22	Brown	2.54
Boone	0.70	Bureau	1.42
Calhoun	1.54	Carroll	1.39
Champaign	0.79	Cass	1.39
Clinton	0.87	Christian	1.53
Cook	1.55	Clark	0.89
De Witt	1.28	Clay	0.83
DeKalb	0.83	Coles	0.69
DuPage	1.26	Crawford	1.51
Ford	1.14	Cumberland	1.48
Grundy	0.67	Douglas	0.76
Henry	1.41	Edgar	1.12
Jackson	0.75	Edwards	1.31
Jersey	0.89	Effingham	0.83
Kane	1.07	Fayette	1.00
Kankakee	0.99	Franklin	1.06
Kendall	0.97	Fulton	1.65
Lake	1.02	Gallatin	1.37
Macon	0.92	Greene	0.94
Macoupin	1.33	Hamilton	1.30
Madison	0.83	Hancock	0.88
Marshall	1.54	Hardin	1.67
McHenry	1.15	Henderson	1.84
McLean	0.80	Iroquois	1.19
Menard	1.08	Jasper	0.92
Mercer	0.87	Jefferson	1.38
Monroe	1.44	Jo Daviess	1.61
Peoria	1.26	Johnson	1.17
Piatt	0.91	Knox	1.31
Rock Island	1.29	LaSalle	1.19
Sangamon	1.34	Lawrence	1.90
St. Clair	1.24	Lee	1.65
Stark	1.43	Livingston	1.32
Tazewell	1.31	Logan	0.96
Vermilion	1.26	Marion	0.95
Will	1.06	Mason	0.99
Williamson	1.54	Massac	1.40
Winnebago	1.35	McDonough	0.79
Woodford	1.25	Montgomery	1.67

Appendix 4, Cont'd

Nonmetro County	Value
Morgan	1.17
Moultrie	0.74
Ogle	1.11
Perry	1.05
Pike	0.99
Pope	1.09
Pulaski	0.70
Putnam	1.37
Randolph	0.99
Richland	0.97
Saline	1.64
Schuyler	1.10
Scott	0.92
Shelby	1.03
Stephenson	1.37
Union	1.57
Wabash	1.06
Warren	0.94
Washington	0.77
Wayne	0.91
White	1.02
Whiteside	1.37
