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The Illinois Institute for Rural Affairs (IIRA) works to improve the quality of life for rural residents by partnering with public and private agencies on local development and enhancement efforts.



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# Rural Residents' Evaluation of their College Education: Insights from the Federal Reserve Board's Survey of Household Economics and Decision Making

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## Abstract

This paper explores metro nonmetro differences in value perceptions of college degrees. Responses from 11,648 adults, a nationally representative sample of 18+ year old individuals, were used to gain insights into cost-benefit evaluations of associate / bachelor's degrees. Results of data analysis suggest that rural residents value a degree in education more than a degree in science & engineering or business studies. Contrary to the common belief that rural residents view higher education as a threat to their chances of retaining their young people, this research shows that rural residents stake their self-esteem on higher education.

## Introduction

In higher education marketing, it is customary for providers to use average earnings data such as Figure 1 to highlight the benefits of college education to the target market<sup>2</sup>. An astute reader will note that 50% of each segment in Figure 1 (for example, bachelor's degree holders) will earn less than the average, assuming a normal distribution of wages.

A study from the USDA highlights that compared with urban areas, rural areas lag in the share of adults with college degrees and

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<sup>2</sup> See, for example, <https://hechingerreport.org/with-competition-up-enrollment-down-colleges-are-spending-billions-on-marketing-and-advertising/>.

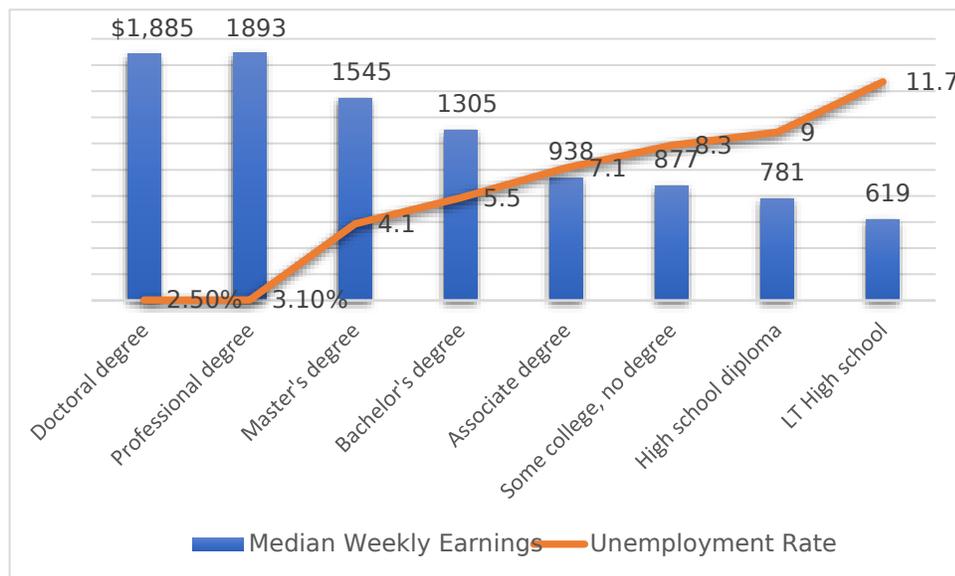
earnings associated with the degree<sup>3</sup>. In other words, rural residents would be more representative of the bottom 50% of the distribution in Figure 1.

Although the USDA study did not explore variations in earnings related to fields of study, it has been reported that the return on investment (ROI) for a college degree depends on the prestige of the degree granting institution and the subject studied<sup>4</sup>. For example, degrees in engineering and computer science produce positive ROI, but studies such

as photography is barely worth the investment<sup>5</sup>.

How does educational attainment differ between the metro and the nonmetro population? How do rural residents perceive the value of their college education? Does value perception differ between rural and urban residents? What is the impact of specialization or college major on value perceptions? This paper addresses these and other related questions.

**Figure 1: Weekly Average Earnings, by Educational Category**



**Note:** Data are for persons aged 25 and over; earnings are for FT wage and salary workers, 2020 data. Source: BLS.

<sup>3</sup> Rural Areas at a Glance, 2017 Edition. *Economic Information Bulletin 171*, April.

<sup>4</sup> Athiyaman, A. (2008), "Demand for engineering graduates in Western Illinois, Southeast Iowa and Northeast Missouri: Assessments and forecasts", *Academy of Educational Leadership Journal*, Vol. 12 No.3, pp.35-54.

<sup>5</sup> <https://freopp.org/is-college-worth-it-a-comprehensive-return-on-investment-analysis-1b2ad17f84c8>.

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## Theory<sup>6</sup>

People are driven to maintain high levels of self-esteem. Conceptually, self-esteem refers to a person's evaluation of himself or herself.

Psychologically, self-esteem functions to minimize anxiety, the existential terror; it minimizes anxiety by strengthening the belief that practicing one's culture (behavioral norms) would help one to attain, for example, symbolic immortality. Thus, earning the Presidential Medal of Freedom for meritorious contribution to one's profession could be a sign of immortality.

The contingencies on which self-esteem is based, that is, the cultural values or behavioral norms that are part of one's self-esteem, could include domains such as academics and athletics. Not all domains are equally important to everyone; for example, Lumina Foundation argues that rural communities view higher education as a threat to their chances of retaining their young people<sup>7</sup>. This implies that college education is not a domain on which rural residents stake their self-esteem.

In summary, as a result of cultural influences, people develop contingencies that they must satisfy to believe that they are people of worth and to have high self-esteem. This theoretical idea helps us to empirically

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<sup>6</sup> See Pyszczynski, T., Greenberg, J., & Goldenberg, J. L. (2003). Freedom versus fear: On the defense, growth, and expansion of the self. In M. R. Leary & J. P. Tangney (Eds.), *Handbook of self and identity* (pp. 314–343). New York: Guilford Press.

examine the value rural residents place on academic achievements.

## Methodology

To address the research questions, microdata from the Survey of Household Economics and Decisionmaking (SHED)<sup>8</sup> were sourced and the research questions addressed using statistical goodness of fit tests. The microdata contained responses from 11,648 adults, a nationally representative sample of 18+ year old individuals; the survey, fielded during November 13 through November 30, 2020, was designed to monitor individual well-being.

The research question about the educational attainment of the metro and the nonmetro population was addressed using responses to the survey item:

What is the highest level of school you have completed or the highest degree you have received?

To understand respondents' evaluation of their college education, the following survey item was cross-classified with respondents' region of residence, metro versus nonmetro:

Overall, how would you say the lifetime financial benefits of your \_\_\_\_\_ degree compare to its costs?

<sup>7</sup> <https://focus.luminafoundation.org/in-rural-america-too-few-roads-lead-to-college-success/>.

<sup>8</sup> <https://www.federalreserve.gov/consumerscommunities/shed.htm>.

Specialization or college major was captured by the survey question:  
Which one of the following broad categories best describes your educational program?

Table 1 lists the operational definitions of the variables; the validity of the measures, convergent validity, has been reported earlier<sup>9</sup>.

**Table 1: Operational Definitions**

Variable, from SHED	Operational Definition
PPMSACAT: Place of residence	Nonmetro = 0; Metro =1
PPGENDER: Respondent's gender	Male = 1; Female = 2
PPETHM: Race	White = 1; Black = 2; Hispanic = 3; Other = 4
PPAGECT4: Age category	18-29 = 1; 30-44 = 2; 45-59 = 3; GTE 60 = 4
inc_4cat_50k: Income category	LT \$25,000 = 1; \$25,000-\$49,999 = 2; \$50,000-\$99,999 =3; GTE \$100,000 = 4
ED1: Educational program or specialization	Business/management = 1; Computer/Information sciences =2; Education =3; Engineering =4; Health = 5; Humanities/arts = 6; Law = 7; Life sciences = 8; Physical sciences/math = 9; Social/behavioral sciences = 10; Vocational/technical training = 11; Other = 12; Undeclared = 13.
ED6_a: Will choose a different field of study	Yes =1; No = 2
ED6_b: Will attend a different school	Yes =1; No = 2; Refused = -1
ED6_d: Will complete more education	Yes =1; No = 2; Refused = -1
ED10: Financial benefits of your degree compared to its costs	Financial benefits are much larger =1; Financial benefits are somewhat larger = 2; About the same = 3; Financial costs are somewhat larger = 4; Financial costs are much larger = 5.

<sup>9</sup> Jeff Larrimore, Maximilian Schmeiser, and Sebastian Devlin-Foltz, "Should You Trust Things You Hear Online? Comparing SHED and Census Bureau Survey Results," Finance and

Economics Discussion Series Notes (Washington: Board of Governors of the Federal Reserve System, October 15, 2015).

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## Findings

### Educational Attainment

Statistically, educational attainment doesn't differ between the metro and the nonmetro residents; the modal value for the metro region is the "Bachelor's

degree". In contrast, the largest category of educational attainment for the nonmetro residents is the "High school diploma or GED" (Table 2).

**Table 2: Educational Attainment by Region**

Education	Metro	Nonmetro	Nation
Less than high school	7%	9%	7%
High school degree or GED	21	30	22
Some college but no degree	20	22	21
Associate degree	8	9	8
Certificate or technical degree	5	7	5
Bachelor's degree	22	13	20
Master's degree	10	6	10
Professional degree (e.g. MBA)	4	1	4
Doctoral Degree	2	2	2
All (N)	100% (218.2mil)	100% (33.7mil)	100% (251.9mil)

**Note:** Observed  $\chi^2 = 7.14$ ,  $p = 0.95$ .

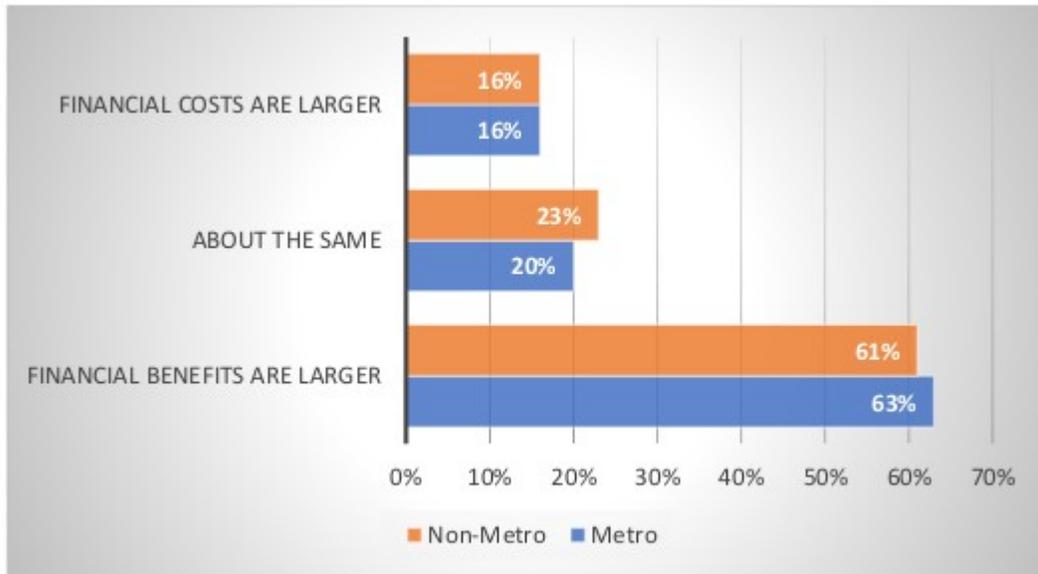
### Value Perceptions of College Education

Figure 2 highlights the value perceptions of associate or bachelor's degree; statistically, perceptions do not differ between the metro and the nonmetro. However, in absolute numbers, a lower proportion of nonmetro residents believe that the financial benefits are larger for the degree, 61% for the nonmetro compared to 63% for the metro.

Further crosstabulation of benefit-cost evaluations with demographic variables such as gender suggest:

1. Females are more skeptical about the value of their degree;
2. Lower earnings result in negative evaluations;
3. A higher proportion of nonmetro blacks believe that the financial costs of their college degree are higher than the benefits of the degree, and
4. One's age is positively correlated with evaluations, higher the age, higher the value perception of the degree (Table 3 and Appendix 1).

**Figure 2: Benefit-Cost Perception: Associate or Bachelor’s Degree**



**Table 3: Value Perceptions of Associate / Bachelor’s Degree: Demographic Influences**

**Gender**

	Metro		Non-Metro		Total
	Female	Male	Female	Male	
1. Financial benefits are larger	57%	70%	60%	63%	63%
2. About the same	22	18	24	22	20
3. Financial costs are larger	20	12	16	15	16
Total, 100%; N in mil	52.7	47.9	6.2	4.3	111.2

**Age**

	Metro – Age Group				Non-Metro– Age Group			
	18-29	30-44	45-59	60+	18-29	30-44	45-59	60+
Financial benefits are larger	55	57	66	75	44	54	64	75
About the same	21	22	21	17	29	25	23	19
Financial costs are larger	24	21	13	7	27	21	13	6
Total, 100%; N in mil	23.2	28.2	23	26.2	1.8	2.7	2.6	3.3

**Note:**  $\chi^2 = 42.7$ ;  $p < 0.01$

Regarding area of study and value perceptions, a degree in education is

most valued in the nonmetro whereas a degree in science and engineering is highly valued in the metro (Table 4).

**Table 4: Value Perceptions of Associate / Bachelor’s Degree by Educational Program**

	Metro					
	Business	Health	Education	Science and Engineering	Humanities/arts	Social/behavioral sciences
Financial benefits are larger	65%	66%	64%	74%	54%	58%
About the same	21	17	19	13	21	23
Financial costs are larger	13	17	16	13	25	19
Total, 100%; N in mil	23.3	11.0	10.2	23.5	12.4	8.9

	Nonmetro					
	Business	Health	Education	Science and Engineering	Humanities/arts	Social/behavioral sciences
Financial benefits are larger	63%	56%	68%	67%	56%	61%
About the same	19	27	24	17	20	22
Financial costs are larger	18	16	8	15	24	18
Total, 100%; N in mil	2.1	1.3	1.5	1.8	1.4	0.9

**Note:**  $\chi^2 = 53.85$ ;  $p = 0.001$ .

## Summary and Conclusion

A common belief among economic developers is that rural communities fear outmigration of youth, so they do not value higher education<sup>10</sup>. I tested the validity of this belief empirically using data from SHED, 2020.

Results of data analysis suggest that one’s value perception of a college degree is not contingent on one’s geographical area of residence, but on one’s area of study. Specifically, metro residents value science and engineering

education whereas rural residents perceive the most value for an education specialization. Degrees in humanities / arts are valued the least, by both the metro and the nonmetro residents.

It has been said that without an education, man remains always a child<sup>11</sup>; education enables us to know and appreciate our culture. The results of this research show that college education is a salient part of nonmetro residents’ self-esteem.

<sup>10</sup> See footnote 7.

<sup>11</sup> *The Genius of John Ruskin: Selections from his Writings* ed. John D. Rosenberg (George Allen and Unwin, 1963)

## Appendix 1: Value Perceptions of College Education: Additional Information

### (1) Income

#### Metro

	Less than \$25,000	\$25,000- \$49,999	\$50,000- \$99,999	\$100,000 or more
Financial benefits are larger	44	46	58	76
About the same	31	29	21	15
Financial costs are larger	25	25	21	9
Total, 100%; N in mil	12.8	12.3	26.7	48.1

#### Nonmetro

	Less than \$25,000	\$25,000- \$49,999	\$50,000- \$99,999	\$100,000 or more
Financial benefits are larger	26	47	70	77
About the same	39	31	20	15
Financial costs are larger	34	23	10	8
Total, 100%; N in mil	1.8	1.8	3.1	3.7

### (2) Race

#### Metro

	White	Black	Hispanic
Financial benefits are larger	66	54	58
About the same	18	24	23
Financial costs are larger	15	21	19
Total, 100%; N in mil	66.9	10.0	11.2

#### Nonmetro

	White	Black	Hispanic
Financial benefits are larger	63	44	76
About the same	23	29	8
Financial costs are larger	14	27	16
Total, 100%; N in mil	9.1	0.6	0.3