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## Metropolitan-Micropolitan Difference in Available Labor Force Characteristics: Three Great Plains Labor Basins

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### **Abstract**

This study explores differences in labor availability characteristics among those living in metropolitan and micropolitan areas. Data used in this study are from surveys of adults in two adjacent Midwestern states and from three separate labor basins. Primary patterns under examination include wage demands, benefit demands, distance willing to commute for a job, perceived underemployment and entrepreneurial propensity. Bivariate analyses show no relationship between basin size and entrepreneurial propensity nor between basin size and willingness to commute. However, basin size has significant influence on four of the seven dependent variables, even after controlling for many sociodemographic characteristics. In multivariate analyses, health benefits, retirement benefits, education assistance and underemployed for skills continue to be significantly associated with size of basin, while desired wage, on the job (OJT) or paid training and underemployed for education are not significantly associated. Micropolitan area available labor pool (ALP) members place more importance on health benefits, retirement benefits and education assistance in considering new employment than do metropolitan ALP members. Among employed ALP, metropolitan respondents have a stronger perception of being underemployed given their skill level. These data are from only three labor basin areas. Variation is highly restricted due to the small number of places for comparative analysis. Future research will incorporate additional labor basins.

## Introduction

This research note explores the ways in which available labor pool characteristics differ by the size of a labor basin. Does size of place influence desired wage, desired job benefits, minutes required to commute, various perceived types of unemployment, and entrepreneurial propensity? A comparison of these available labor pool characteristics by place size is conducted, and the relative influence of place size is examined in the presence of individual-level sociodemographic characteristics, including education level, household income, gender and age. Initially, three place sizes are compared, which could be roughly classified in terms of total labor basin population as metropolitan, medium micropolitan and very small micropolitan. Because no substantive differences in the available labor pool characteristics are found when comparing the medium to the very small micropolitan labor basin, most analyses group the micropolitan places together and then compare them as a single group to the metropolitan. The authors use the [U.S. Census definitions of micropolitan and metropolitan](#).

## Background

As Aistrup, Zollinger and Walker (2003)<sup>1</sup> assert, typical labor force data that are readily available to economic developers, existing businesses and site locators lack sufficient detail for optimal business expansion or siting decision-making. This primarily occurs because existing labor force data miss the ‘hidden’ pool of people who might be available for work but do not show up in unemployment or underemployment statistics. The available labor pool (ALP) concept and methodology was developed to provide insight beyond official statistics. The ALP is defined as follows:

1. Those who are currently looking for full-time employment but are retired, full-time students, or currently unemployed in any manner.
2. Those who are currently employed but are looking for other full-time employment, and
3. Those who would consider different employment for the “right opportunity.” (Aistrup, Zollinger and Walker, 2003:224)<sup>2</sup>.

Survey methodology has been developed and used in multiple labor basins to estimate the ALP. The authors use data from three separate and distinct labor basins located in the Great Plains to explore differences in the ALP by place size.

While data from many labor basins of varying sizes would be more ideal for comparative analyses by basin size, such survey data are not available. The authors have collected data as client-centered projects allowed, resulting in survey data collected within a reasonably close period of time both across and within three basins that are homogenous enough in all but population size to warrant comparisons.

These labor basins are operationally defined by selecting all counties adjacent to a center-point county, which contains a community considered to be the center-place of the basin. All of the basins are located in the Great Plains and are separated by about 500 miles in a line angling northwest to southeast. The medium-size micropolitan basin lies almost directly between the metropolitan and the very small micropolitan basins, and it is almost equidistant from the two basins.

The total population of the metropolitan labor basin at the time of the survey was about 707,000, with more than half of the population (about 466,000) located in the center county of that basin. The metropolitan labor basin has a larger than average high-skill manufacturing base compared to similar size metropolitan areas in the U.S. The medium micropolitan basin had a population of close to 84,000, with the center county the most populated at about 30,000. The center county is a regional trade center. The very small micropolitan basin had a population of almost 38,000 at the time of the survey, with the center county containing about a third (about 11,000) of the population. These basins are in very similar ecoregions, and the primary agricultural activities around and within the three basins are very similar, with wheat and cattle operations dominating the rural landscape.

Table 1 shows the official population, the civilian labor force, the unemployment rates and the number of counties for the three study areas.

	Metropolitan Basin	Medium Size Micropolitan Basin	Small Size Micropolitan Basin
Population	706,709	83,669	37,939
Civilian Labor Force (CLF)	382,541	46,218	20,781
Unemployment Rate	4.1%	2.6%	2.2%
Number of Counties	10	9	9

Table 1. Labor Basin Population, Civilian Labor Force, Unemployment Rate

## Methods

The data used in this research were collected for client-centered projects addressing labor availability, skills and education levels of available workers, perceptions of underutilization and the propensity for entrepreneurship.

## Survey Research

Data were collected from random digit telephone surveys of adults living in each labor basin using a Computer Assisted Telephone Interviewing (CATI) system[[1](#)]. The telephone numbers were assembled by randomly generating suffixes within specific area codes and prefixes within each basin. Unlisted numbers were included in each sample, while known business, fax, modem, and disconnected numbers were screened from each sample in efforts to reach households only.

To identify an individual adult respondent within each household, surveyors requested to “speak with an adult over the age of 17 that has had the most recent birthday.” Up to eight attempts were made to contact each respondent during three calling periods (10 AM to Noon, 2 PM to 4 PM, and 6 PM to 9 PM). Initial refusals were re-attempted twice.

### **Metropolitan Labor Basin**

Surveying in the metropolitan labor basin took place from March 1, 2006, to April 28, 2006. A total of 4,249 households were successfully contacted during the data collection period. In 2,432 households, the selected adult agreed to be interviewed, resulting in a cooperation rate of 57% and a margin of error of +/-2.00%. Survey respondents - 65 years of age or older and retired, or over 65 and not working and not interested in a new or different job, were not asked the entire battery of survey questions and are not included in the analysis of this report. The number of remaining respondents (all other working and non-working respondents) totaled 1,648. These respondents are considered eligible respondents. Of the 1,648 cooperating and eligible respondents, 38% (or 628) indicated that they were available for new or different full-time employment and/or were looking for a new or different full-time job. This subgroup is considered the available labor pool for the metropolitan labor basin. Responses from 628 individuals provide a margin of error of +/- 3.9%.

### **Medium Micropolitan Labor Basin**

Data for the medium micropolitan labor basin were collected from October 26, 2004, to November 8, 2004. A total of 958 households were successfully contacted during the phone survey, and in 694 of these households an adult agreed to do the interview. This represents a cooperation rate of 72.5%. Of these respondents, 65% (or 453) indicated that they were available for new or different full-time employment and/or were looking for a new or different full-time job. Thus, this subgroup is the available labor pool for the medium micropolitan labor basin. Responses from 453 individuals provide a margin of error of +/- 4.6%.

### **Small Micropolitan Labor Basin**

Surveying in the small micropolitan labor basin took place from June 2, 2004, to June 22, 2004. A total of 1,712 households were successfully contacted during the phone survey. In 1,199 of these households, an adult agreed to do the interview, resulting in a cooperation rate of 70% and a margin of error of +/- 2.8%. Eligible respondents totaled 502, and of these respondents, 294 (or 59%) are members of the available labor pool for the small micropolitan labor basin. Responses from 294 individuals provide a margin of error of +/- 5.7%.

### **Items for Operationalizing ALP**

Available Labor Pool (ALP) membership is established by responses to four questions in the survey. Respondents are asked if they are “currently working full-time, working part-time, a non-

working student, a homemaker, retired, disabled, or unemployed or laid-off.” Later in the survey, respondents are asked if they would “consider taking a new or different job” if the “right opportunity came along.” Respondents answering “yes” to this question were then asked if they would “most consider a new full-time job or a new part-time job” and whether they are “currently looking for a new or different job.”

Respondents that would not consider a new or different job and/or that were interested only in part-time work are removed from the pool of respondents classified as available labor. The remaining respondents are considered members of the ALP. Figure 1 displays four ALP subgroups (employed or non-employed[2], and looking or simply available for new employment).

Figure 1 (next page) also shows how these groups compare across the three basins. For example, while the ALP members in the “Right Opportunity, Employed” subgroup dominate the ALP in all three study areas, about 9% more ALP members from the medium micropolitan area are in this subgroup than are ALP members in the metropolitan area. Slightly more than 14% of the metropolitan ALP members are either non-employed and looking for a job or are non-employed and available for work given the right opportunity, but only 8% of the medium micropolitan ALP members are in these subgroups.

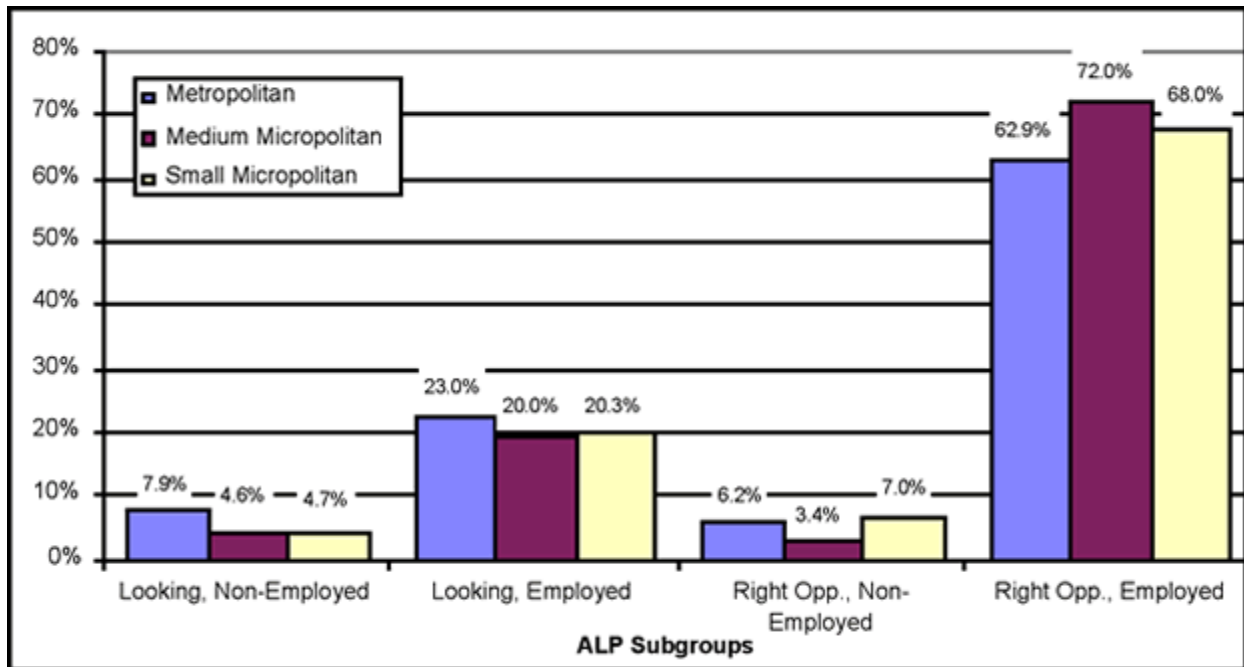


Figure 1. ALP Subgroups by Basin Size

**Study Variables**

To assess the relationships among size of place and desired wage, minutes willing to commute, underutilization and entrepreneurship, 23 variables are considered.

## **Independent Variable – Size of Basin**

For a full description of the size of basin (Location) variable, the control variables and the dependent variables, see Table 2. The primary independent variable for this study effort is Location, dichotomized as Metropolitan and Micropolitan. As previously noted, three place sizes were initially conceived as comprising the independent variable, but the two smaller labor basins have been combined for this analysis. Respondents were assigned either attribute (metropolitan or micropolitan) based upon study area.

## **Control Variables**

Survey respondents were also asked questions regarding education level, household income, gender and age. We presume that many of these respondent-level sociodemographic characteristics could reasonably influence the dependent variables. Multivariate analyses control for the influence of these variables in order to determine the robustness of the location variable. Education level ranges from “Less than High School” to “Doctoral Degree.” Household income ranges from “Less than \$10,000” annually to “More than \$100,000” annually. Age is calculated from responses to a question asking for the “year of birth” of the respondent. Finally, gender is interviewer-identified, and when an interviewer is uncertain, a ‘don’t know’ code was assigned.

## **Dependent Variables**

Eighteen dependent variables are considered. The Desired Wage variable is derived from survey questions asking the respondent for the “approximate hourly wage that” he or she “would expect to earn in a new job.” If a yearly salary was given, that figure was recorded and converted into an hourly wage, dividing it by the total hours worked per year at a typical full time job (2,080 hours). Hourly wages were then adjusted for inflation to 2004 dollars.

Seven dependent variables address various benefits and opportunities that respondents might consider “very important” in their “decision to take a new job.” These benefits/opportunities are Health Insurance Benefits, Retirement Benefits, Paid Vacation, Education Assistance, Flextime/Flexible Hours, On-the-Job Training (OJT) or Paid Training and the Amount of Pay or Salary. Answer options include “yes” and “no.”

Another dependent variable is Willingness to Commute. This variable addresses “how many minutes” a respondent “would be willing to travel daily, one way, to a new job” given the “right pay and benefits.” Surveyors recorded the number of minutes given, and minutes beyond 120 were considered outliers and truncated to 120 during analysis. (Three responses were truncated in this study.)

Four dependent variables represent the concept of underemployment, defined in this study as the self-perception that the worker is employed in such a way that does not fully utilize his or her

skills, education, or job experience. To introduce this concept, surveyors read a statement describing underemployment, followed by four questions:

“Because of circumstances, some workers have jobs that do not fully match their skills, education or experiences. He or she would be underemployed. For example, a master plumber taking tickets at a movie theater would be a mismatch between skill level and job requirements.

Do you consider yourself an underemployed worker because your current job does not use your skills and talents?

Do you consider yourself an underemployed worker because you have formal education or training that your current job does not use?

Do you consider yourself an underemployed worker because you earned more money at a previous, but similar, job?

Do you consider yourself an underemployed worker because you are unable to work as many hours as you would like at your job?”

These questions were asked of employed respondents only. Answer options included “yes” and “no.”

A final set of survey questions represent the concept of entrepreneurship propensity. Non-business owning survey respondents were asked, “In the past few years, have you seriously thought about starting your own business and making it your full-time job.” Respondents who answered “yes” were considered “potential entrepreneurs” and were then asked to respond to a series of statements designed to assess the strength of their desire to become full-time business owners:

I would rather own my own business than pursue a promising career elsewhere.

I would rather own my own business than earn a higher salary working for someone else.

I am willing to work nights and weekends to make my own business a success.

I am willing to have less security for my family in order to operate my own business.

Answer options were Strongly Agree, Mildly Agree, Mildly Disagree, and Strongly Disagree. For this paper, these answer options were recoded as Agree and Disagree.

## **Findings**

Table 2 shows the results of the univariate analysis of metropolitan and micropolitan areas. Mean, median and standard deviations are shown for continuous variables (age, desired wage



and willingness to commute), while percentages are shown for the other variables. Tables 3, 4, and 5 show the results of the bivariate analysis, while 6, 7, and 8 show the regression analysis.

### *Univariate Analysis*

Table 2 shows that almost 25% of the ALP have bachelor degrees, while an additional 12.5% have advanced degrees. Slightly more than 97% have at least a high school diploma. About half of the ALP members have household incomes of \$50,000 or more. More than half (51.6%) are female, and the mean age is 43 years old. Almost 68% of the ALP is from the metropolitan study area.

The mean desired wage is \$19 per hour, while the median desired wage is about \$15 per hour. Regarding desired benefits or opportunities, at least 80% of the respondents regarded health insurance, retirement, OJT, and a good hourly wage or salary as very important in their decision to take a new or different job.

Respondents are willing to commute about 35 minutes to a job one-way on the mean and, 30 minutes on the median. About 35% of employed ALP members consider themselves underemployed because they have training or education that is not currently being used. About 26% consider themselves underemployed because they have unused skills.

Slightly more than 85% of “potential entrepreneurs” are willing to work nights and weekends to make their business a success, while almost 75% would rather own their own business than pursue a successful career elsewhere.

Location and Control Variables	Value	Dependent Variables	Value
<b>Location (n=937)</b>	<i>Percent</i>	<b>Desired Wage (n=847)</b>	<i>Dollars per hour</i>
1 <sup>a</sup> = Metropolitan	67.7	Mean	19.0
2= Micropolitan	32.3	Median	15.2
		St. Dev.	13.9
<b>Education (n=933)</b>	<i>Percent</i>	<b>Very Important Benefits</b>	<i>Percent "Yes"<sup>b</sup></i>
1= Less High School	2.8	Health Insurance (n=935)	87.6
2= High School	21.4	Retirement (n=933)	86.9
3= Some College	24.7	Paid Vacation (n=932)	79.3
4= Associates/Technical	14.1	Education Assistance (n=929)	57.8
5= Bachelors	24.4	Flextime/Flexible Hours (n=933)	66.3
6= Masters/Law	11.0	OJT or Paid Training (n=930)	82.9
7= Doctoral	1.5	Good Hourly Wage/Salary (n=929)	88.1
<b>Household Income (n=859)</b>	<i>Percent</i>	<b>Minutes Willing to Commute (n=929)</b>	<i>Minutes One Way</i>
1= < \$10k	2.6	Mean	35.5
2= \$10k-\$20k	7.9	Median	30.0
3= \$20k-\$30k	11.9	St. Dev.	15.2
4= \$30k-\$40k	11.9	<b>Perceptions of Undemployment</b>	<i>Percent "Yes"<sup>b</sup></i>
5= \$40k-\$50k	15.1	Unused Skills (n=810)	26.4
6= \$50k-\$60k	12.5	Unused Education (n=814)	35.3
7= \$60k-\$70k	10.0	More Income at Previous Job (n=812)	21.4
8= \$70k-\$100k	16.8	Cannot Work Enough Hours (n=814)	12.7
9= \$100k <	11.4	<b>Propensity for Entrepreneurship</b>	<i>Percent "Yes/Agree"<sup>b</sup></i>
<b>Gender (n=934)</b>	<i>Percent</i>	Contemplated Own Business (n=657)	37.7
1= Female	51.6	More than Career Elsewhere (n=242)	74.9
2= Male	48.4	More than Higher Salary (n=245)	57.4
<b>Age at Time of Study (n=920)</b>	<i>Years</i>	Will Work Nights/Weekends (n=248)	85.8
Mean	43.0	Will Accept Less Security (n=246)	39.3
Median	44.0		
St. Dev.	11.8		

<sup>a</sup> Coding Scheme      <sup>b</sup> 1=Yes/Agree 2=No/Disagree

Table 2: Location Variable, Control Variables and Dependent Variables: Univariate Results

*Bivariate Analysis*

Table 3 shows the associations between the independent variables and the size of place. The metropolitan area is coded 1 and the micropolitan area is code 2, so a negative correlation coefficient suggests that metropolitan area ALP members are slightly more educated than micropolitan area ALP members. This relationship is statistically significant at the .001 level.

Among the ALP, household income and location are related as well, with metropolitan area household incomes being generally higher than micropolitan area household incomes. The relationship between location and gender is not statistically significant. There is no relationship between location and age.

	Location		<i>r</i> <sup>a</sup>	sig.
	Metro	Micro		
<b>Education</b>	<b>Percent Each</b>		<b>-.104</b>	<b>.001</b>
Less High School	2.5	3.3		
High School	19.6	25.2		
Some College	23.9	26.2		
Associates/Technical	12.8	16.9		
Bachelors	27.7	17.6		
Masters/Law	11.7	9.6		
Doctoral	1.7	1.0		
<b>Household Income</b>	<b>Percent Each</b>		<b>-.257</b>	<b>.000</b>
< \$10k	2.6	2.5		
\$10k-\$20k	5.5	13		
\$20k-\$30k	9.5	17		
\$30k-\$40k	9.3	17.3		
\$40k-\$50k	13.9	17.7		
\$50k-\$60k	13.6	10.1		
\$60k-\$70k	11.2	7.6		
\$70k-\$100k	19.8	10.5		
\$100k <	14.8	4.3		
<b>Gender</b>	<b>Percent</b>		<b>.024</b>	<b>.455</b>
Female	52.4	49.8		
Male	47.6	50.2		
<b>Age at Time of Study</b>	<b>Years</b>		<b>-.057</b>	<b>.082</b>
	<i>Mean</i>	43.4	42.0	
	<i>Median</i>	44.0	43.0	
	<i>St. Dev.</i>	11.7	11.8	

<sup>a</sup>Where appropriate T-Tests, Chi Square, and Gamma were also used to assess bivariate associations. Results were consistent with the Pearson's r associations.

Table 3: Association between Control Variables and Location

Table 4 (next page) shows the associations between the dependent variables and the size of place. Location is significantly correlated with these six variables: desired wage, health insurance, retirement, education assistance, OJT or paid training and underemployment for education.

		Location			
		Metro	Micro	<i>r</i> <sup>a</sup>	sig.
<b>Desired Wage</b>		<b>Dollars per hour</b>		<b>-.132</b>	<b>.000</b>
	<i>Mean</i>	20.3	16.4		
	<i>Median</i>	16.4	14.3		
	<i>St. Dev.</i>	15.6	8.9		
Important Benefits		<i>Percent "Yes"</i>			
<b>Health Insurance</b>		<b>84.5</b>	<b>94.1</b>	<b>-.136</b>	<b>.000</b>
<b>Retirement</b>		<b>84.7</b>	<b>91.7</b>	<b>-.097</b>	<b>.000</b>
Paid Vacation		79.5	78.8	.008	.801
<b>Education Assistance</b>		<b>52.9</b>	<b>68.0</b>	<b>-.143</b>	<b>.000</b>
Flextime/Flexible Hours		65.9	67.3	-.014	.660
<b>OJT or Paid Training</b>		<b>80.8</b>	<b>87.4</b>	<b>-.082</b>	<b>.012</b>
Good Hourly Wage/Salary		88.6	86.8	.026	.431
Minutes Willing to Commute		<i>Minutes One Way</i>		.001	.987
	<i>Mean</i>	35.5	35.5		
	<i>Median</i>	30.0	30.0		
	<i>St. Dev.</i>	15.3	15.2		
Perceptions of Underemployment		<i>Percent "Yes"</i>			
<b>Unused Skills</b>		<b>28.4</b>	<b>22.4</b>	<b>.064</b>	<b>.067</b>
<b>Unused Education</b>		<b>32.7</b>	<b>40.4</b>	<b>-.075</b>	<b>.032</b>
More Income at Previous Job		21.0	22.3	-.015	.669
Cannot Work Enough Hours		12.5	13.0	-.007	.852
Propensity for Entrepreneurship		<i>Percent "Yes/Agree"</i>			
Contemplated Own Business		37.1	39.9	-.024	.547
More than Success Elsewhere		74.8	75.3	-.015	.815
More than Higher Salary		58.7	53.7	.046	.471
Will Work Nights/Weekends		84.3	90.4	-.080	.210
Will Accept Less Security		39.8	37.8	.014	.831

<sup>a</sup>Where appropriate T-Tests, Chi Square, and Gamma were also used to assess bivariate associations. Results were consistent with the Pearson's *r* associations.

Table 4: Associations Between Dependent Variables and Location

The negative relationship between location and desired wage means that metropolitan respondents offered a higher desired wage than did micropolitan respondents. Regarding benefits and opportunities, negative relationships also exist between location and health insurance, retirement benefits, education assistance and OJT. These relationships suggest that micropolitan respondents are more likely than metropolitan respondents to hold these benefits and opportunities as very important considerations for a new job.

The relationship between location and underemployment for education is statistically significant at the .05 level. The negative correlation suggests that micropolitan respondents are more likely than metropolitan respondents to consider themselves underemployed because they have unused education or training. However, this relationship is rather weak.

The relationship between location and underemployment for skills is nearly statistically significant at the .05 level. This relationship is positive, suggesting that more metropolitan than micropolitan respondents perceive underemployment, but this relationship is very weak.

Somewhat surprisingly, minutes willing to commute and all of the entrepreneurship variables are not significantly related to location.

Variables	Desired Wages	Health Benefits	Retirement Benefits	Vacation Benefits	Education Assistance	Flexible Hours	OTJ or Paid Training	Good Salary	Minutes Willing to Commute
Highest Level of Educator	.346 ***	.001	-.003	.027	.204 ***	.004	.204 ***	.001	-.051
Total Household Income	.457 ***	.247 ***	-.013	-.075 *	.217 ***	-.001	.140 ***	.028	-.079 *
Gender	.207 ***	-.033	.020	-.027	.065 *	.121 ***	.033	-.043	.132 ***
Age at time of study	.144 ***	-.013	-.081 *	.023	.156 ***	.154 ***	.067 *	.016	.045
Location (from Table 2)	-.132 ***	-.136 ***	-.097 **	.008	-.143 ***	-.014	-.082 *	.026	.001

Variables	Underemp. for Skills	Underemp. for Education	Underemp. for Income	Underemp. for Hours	Like to Start Own Business	More than Career Else	More than Higher Salary	Will Work Nights/Wknds	Will Accept Less Security
Highest Level of Educator	.035	-.075 *	.059	.203 ***	.054	.068	.030	.202 **	.053
Total Household Income	.182 ***	.139 ***	.121 ***	.194 ***	.032	-.047	-.115	.133 *	-.058
Gender	.002	.015	-.003	-.031	-.213 ***	-.148 *	-.181 **	-.148 *	-.182 **
Age at time of study	.092 **	.077 *	-.023	.004	.031	.080	-.090	.051	-.177 **
Location (From Table 2)	.064	-.075 *	-.015	-.007	-.024	-.015	.046	-.080	.014

\*\*\* p < .001    \*\* p < .01    \* p < .05

Table 5: Bivariate Associations between Dependent Variables and Control Variables ([Click here for larger image](#))

Table 5 shows the associations between location, education level, household income, gender and age and the 18 dependent variables.

All of the control variables significantly correlate with desired wage. As previously noted, the negative correlation between location and desired wage means that metropolitan respondents generally offered a higher desired wage than did micropolitan respondents. Level of education and total household income positively correlate with desired wage. This correlation shows that respondents with higher education levels or higher household incomes offered higher desired wages than did respondents with lower education levels or lower household incomes.

Gender is coded 1 for females and 2 for males. A positive relationship between gender and desired wage shows that males desired higher wages than females. Age also is positively associated with desired wage, with older respondents generally desiring higher wages than younger respondents.

All of the control variables also significantly correlate with importance of education assistance as a job benefit, but the relationships are weak. Similarly, all four underemployment variables are significantly related to total household income, but the relationships are not strong.

The only control variable associated with all measures of entrepreneurship propensity is gender. Negative correlation suggests that males are more likely to agree to the four statements regarding entrepreneurship propensity than are females. As education increases, the willingness to work nights and weekends at one's own business decreases.

### *Multivariate Analysis*

Tables 6a and 6b show the results of multiple regression analysis for each of the dependent variables that are significantly (or very nearly significantly) associated with location in the bivariate analysis.

Variables	Desired Wage		
	B	Sd Err	Beta
Constant	-17.833	3.797	
Location	-1.193	1.046	-.038
Highest Level of Education	2.349	.353	.230 ***
Total Household Income	2.139	.240	.322 ***
Gender	5.719	.963	.196 ***
Age at Time of Study	.111	.043	.084 **
Underemployed for Income	2.742	1.145	.078 *
R <sup>2</sup>	.283		
*** p < .001	** p < .01	* p < .05	

Table 6a: OLS Regression with Desired Wage as Dependent

The influence of size of basin on health benefits is weak ( $\beta = -.078$ ) compared to the influence of household income ( $\beta = .273$ ), and weak overall when examining the Bs. The influence of size of basin on retirement benefits ( $\beta = -.097$ ) is about the same as the influence of age ( $\beta = -.080$ ). The influence of size of basin on desire for education assistance is moderate ( $\beta = -.099$ ) compared to the influences of level of education ( $\beta = .149$ ), age ( $\beta = .123$ ) and income ( $\beta = .118$ ). The influence of size of basin on perception of being underemployed for skills is moderate ( $\beta = .128$ ) compared

to the influence of household income ( $\beta = .230$ ). In all these regressions, the partial regression coefficients are low.

Variables	Health Benefits			Retirement Benefits			Education Assistance		
	B	Sd Err	Beta	B	Sd Err	Beta	B	Sd Err	Beta
Constant	1.171	.074		1.282	.076		.884	.108	
Location	-.056	.025	-.078 *	-.069	.025	-.097 **	-.105	.036	-.099 **
Highest Level of Education	-.023	.008	-.097 **	.007	.009	.031	.051	.012	.149 ***
Total Household Income	.040	.005	.273 ***	-.007	.006	-.045	.025	.008	.118 ***
Gender	-.036	.023	-.054	.031	.023	.047	.078	.033	.079 *
Age at Time of Study	-.001	.001	-.044	-.002	.001	-.080 ***	.005	.001	.123 ***
R <sup>2</sup>	.078			.017			.096		

Variables	OJT or Paid Training			Underemployed for Education			Underemployed for Skills		
	B	Sd Err	Beta	B	Sd Err	Beta	B	Sd Err	Beta
Constant	.867	.084		1.635	.119		1.319	.110	
Location	-.036	.028	-.045	-.040	.038	-.040	.120	.035	.128 ***
Highest Level of Education	.051	.009	.196 ***	-.056	.013	-.169 ***	-.015	.012	-.050
Total Household Income	.007	.006	.043	.039	.009	.181 ***	.046	.008	.230 ***
Gender	.040	.026	.054	-.019	.035	-.020	-.027	.032	-.031
Age at Time of Study	.001	.001	.043	.002	.002	.050	.002	.001	.057
R <sup>2</sup>	.055			.048			.054		

Table 6b: OLS Regressions with Job Benefit Desires and Underemployment by Type as Dependents. ([Click here for larger image](#))

### Concluding Comments

Bivariate analyses show no relationship between basin size and entrepreneurial propensity nor between basin size and willingness to commute. However, basin size continues to have a significant influence on four of the seven dependent variables, even after controlling for many sociodemographic characteristics. In multivariate analyses, health benefits, retirement benefits, education assistance and underemployed for skills continue to be significantly associated with size of basin. Desired wage, OJT or paid training and underemployed for education, however, are no longer significantly associated.

Micropolitan area ALP members place more importance on health benefits, retirement benefits and education assistance when considering new employment than do metropolitan ALP members. Among employed ALP members, metropolitan respondents have a stronger perception of being underemployed given their skill level.

### Limitations

In all of the regression analyses, the partial regression coefficients and the coefficients of determination ( $R^2$ ) are low, indicating that little variation in the dependent variables is explained. These data are from only three labor basin areas; thus, variation is highly restricted due to the small number of places for comparative analysis. For the majority of analyses, the two smaller

basins (one rural or small micropolitan, and one micropolitan) were combined and subsequently treated as micropolitan. A potential consequence of having only two groupings of basin size (metropolitan and micropolitan) for the majority of analyses is that other contextual variables (e.g. unemployment rate, percent of jobs in manufacturing, etc.) could be more operative than basin size, but their effects cannot be ascertained. Future research will incorporate additional labor basins.



**End Notes:** Mike Walker and Brett Zollinger, "Metropolitan-Micropolitan Difference in Available Labor Force Characteristics: Three Great Plains Labor Basins." [Online Journal of Rural Research & Policy](#) (2007.1).

[1.](#) Aistrup, Joseph A., Brett Zollinger, Michael Walker. 2003. Defining the Available Labor Pool: The Kansas Labor Force Survey. *Economic Development Quarterly*. 17(3):220-239. [\[back\]](#)

[2.](#) Aistrup, Joseph A., Brett Zollinger, Michael Walker. 2003. Defining the Available Labor Pool: The Kansas Labor Force Survey. *Economic Development Quarterly*. 17(3):220-239. [\[back\]](#)

[\[1\]](#) Data was collected by the Docking Institute's University Center for Survey Research. We thank Joyce Wolfe, Survey Center Manager and Docking Institute Research Associate, for managing these surveys and coordinating the data collection efforts. [\[back\]](#)

[\[2\]](#) The term "non-employed" refers to officially unemployed members of the Civilian Labor Force as well as any non-employed/non-working full-time students, homemakers, retirees, and disabled individuals. [\[back\]](#)

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Mike Walker is the assistant director of the Docking Institute and an instructor in the department of sociology and social work at Fort Hays State University. Mr. Walker joined the Institute in 2000 as a research scientist and assumed the position of assistant director in 2006. He has been the lead researcher for dozens of labor and employment studies Kansas, Missouri, and Nebraska, and is currently active in strategic planning and community development efforts in Kansas. Mike is a member of the Rural Sociological Society, the Community Development Society, the Midwest Sociological Society, and the Western Social Science Association. He recently presented research findings at the Rural Sociological Society meetings in Louisville, Kentucky. Prior to coming to Fort Hays State University, Mike performed ethnographic and survey research in California, Colorado, Utah, Idaho and Nebraska. He also participated in archeological digs in southern Utah, completed a political internship in Washington, D.C. and served in the U.S. Army. Mike regularly teaches urban/rural sociology, community theory and development, and social research methods. He is developing courses in demography and the sociology of work. Mike received his M.S degree in sociology from Utah State University in 1995 and is currently pursuing a doctorate in sociology at Kansas State University.



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Brett Zollinger is the Director of the Docking Institute and the Institute's Center for Survey Research. He is also an associate professor of sociology at Fort Hays State University. Brett's work has been nationally recognized. He received the Rural Sociological Society's Dissertation Award in 1997. He co-authored a report on labor force dynamics in Northwest Missouri that won Best of Class awards from the National Rural Economic Development Association and the American Economic Development Council. Brett has published in several academic journals including, Economic Development Quarterly, Journal of the Community Development Society, Research in Community Sociology, Rural Sociology and Complimentary Health Review. He also has a chapter in the peer reviewed book, Mad About Wildlife, focusing on conflict resolution. He is a member of the American Association of Public



Opinion Research, Rural Sociological Society, Community Development Society, Society for Applied Sociology, American Sociological Association, Midwest Sociological Society and the International Association for Society and Natural Resources. Brett has designed and conducted a wide variety of survey and evaluation research projects at local, state and regional levels on such topics as consumer confidence, labor availability, health campaigns, health care assessment, housing and city services satisfaction, quality of life, crime victims' issues, and attitudes toward wildlife management issues. He is also active in strategic planning and community development efforts in the region. Brett received his Ph.D. in sociology from Utah State University in 1998.