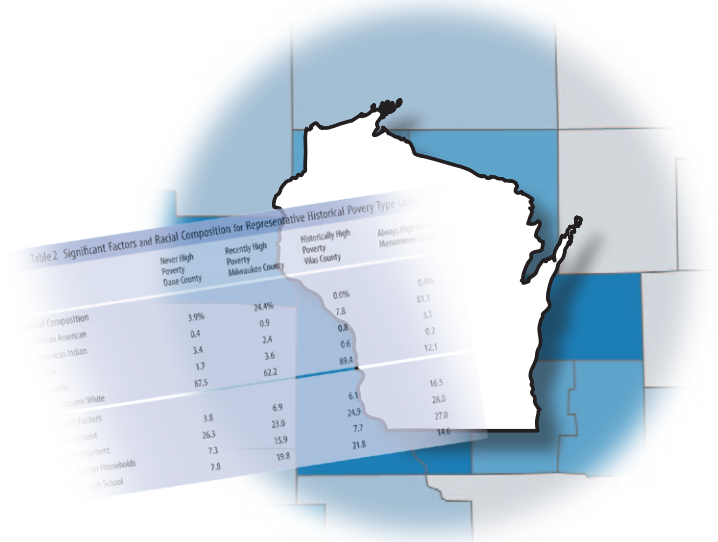# County Factors Related to Wisconsin Poverty, 2000

Katherine J. Curtis, Heather O'Connell

This report is the third in a series of briefings on the results of recent research on the historical, geographic and racial aspects of family poverty in the state of Wisconsin.

We describe the structural forces related to poverty among family households in Wisconsin counties in 2000. Building from the second briefing in this series, we explore several key factors related to poverty to better understand why minority families are disproportionately represented among Wisconsin's impoverished families. We describe the strength and geographical distribution of the forces that influence poverty to promote the development of local programs that effectively target the factors most powerfully associated with economic vulnerability among all Wisconsin families.

Race as a Correlate, Not a Cause of Poverty ──────────────

There is a debate among scholars about the causes of poverty. Some argue that poverty is caused by individual deficiencies, including low educational attainment, a lack of motivation, or cultural orientations which support economic instability.[1] Other researchers assert poverty exists because of structural factors which include labor market characteristics and institutional discrimination.[2] The latter argument suggests some individuals would be poor regardless of their individual characteristics given their structural environment and social status. Importantly, the two sources of poverty could operate simultaneously.

In terms of understanding racial differences in poverty, the individualistic perspective implies that personal characteristics promoting economic vulnerability are more greatly represented among non-white groups than whites. The structural perspective, in contrast, suggests it is the economic constraints and institutional practices within a place that lead to racial disparities. In our research, we identify which county characteristics are most strongly associated with poverty. We are unable to discern whether the factors are owed to individual traits or structural features. However, we are able to demonstrate that race is not among the factors that directly shape family poverty in Wisconsin counties.

We use regression techniques to statistically analyze the relationship between a county's racial composition, structural factors and family poverty rate.[3,4] Table 1 reflects whether each factor is associated with poverty.[5] Results show that the association between race and poverty is explained by structural factors. That is, race is related to poverty only through its relationship with the structural factors that are associated with poverty.

In the previous briefing, we reported that poverty in Wisconsin counties was disproportionately higher among racial minority families. For example, American Indian families were over-represented among the poor by 3 times the group's proportionate representation in the state whereas white families were 1.5 times under-represented. The absence of any "race effect" in our results indicates that the over-representation is due to structural characteristics of the county.

Table 1 Factors Associated with County Poverty	
Structural Factor	**Significant Factor**
Racial Composition	
% African American	No
% American Indian	No
% Asian	No
% Hispanic	No
Economic Structure	
% Unemployment/ Underemployment	Yes
% Manufacturing	No
% FIRE	No
% Service	No
% Other Professional	No
% Farming	No
Demographic Structure	
% Single-Mother Households	Yes
% Retirement Age (65+)	No
% Foreign-born	No
% Disabled	No
% Less than High School Education	Yes

Explanations of Poverty ──────────────

Economic conditions and demographic structure explain about 46% of the variance in county family poverty rates. In technical terms, this means a significant portion of the range in values of poverty across Wisconsin's counties is explained by economic and demographic factors. In substan-

tive terms, this means county family poverty rates are due in large part to the kind and number of jobs available and the types of family households in a county.

Of the factors, unemployment and underemployment (economic factors) and single-mother households (demographic factor) are most strongly associated with family poverty. Education is also associated but to a weaker extent. While the state has been undergoing a dramatic change through immigration, the proportion of the foreign-born population does not significantly contribute to county poverty.

Sources of unemployment and underemployment can be thought of in terms of either individual deficiencies or structural constraints.[6] Education and motivation are two sources of unemployment often attributed to individual traits rather than structural causes. One might argue that an individual is unemployed or underemployed because she did not graduate from high school and, therefore, she is not as competitive in the labor force as someone who has a high school diploma. In this perspective, the source of unemployment is attributed to the person's life choices. However, the same level of education may qualify her for a job in a place with different jobs. In this view, her employment status is a combination of individual (whether she obtained a diploma) and structural causes (the number and quality of available jobs in the place where she lives).

In terms of a lack of motivation, one might argue that although an individual may be searching for employment, she is not looking hard enough due to a poor work ethic. Alternatively, the person could lack motivation because the labor market in which she is searching has a limited number of jobs or only poor quality jobs available, or because employers favor other types of people through unfair hiring practices.[7] Limited job opportunities are an increasing problem given the current economic downturn. Wisconsin may be particularly affected given the historical dependence on manufacturing and the fact that several major plants have already closed across Wisconsin, including the Advance

Transformer's plant in Platteville (Grant County) over a decade ago, the recent General Motors plant closing in Janesville (Rock County) and the pending closing of Harley Davidson's Milwaukee plant (Milwaukee County).[8]

There are two important caveats to consider within this debate. First, the measured influence of unemployment and underemployment is net of the influence of education. Therefore, the association between this economic factor and poverty cannot be explained by education levels. Second, we are analyzing county poverty rates, not an individual's likelihood of living in poverty. This requires that the individual life choices or lack of motivation that presumably promote poverty must be an issue for a sizeable portion of the county population. Our measure of the unemployment and underemployment rates is a characteristic of the county and represents the proportion of the county population that cannot find work or cannot find enough work which, ultimately, results in limited earnings.[9]

Like unemployment and underemployment, the relationship between single-mother status and poverty can be interpreted through the individualistic or the structural lens. Cultural traditions are often used to explain the prevalence of single-mother households; some argue that marriage is devalued among certain segments of the population.[10] Others discuss the prevalence of single-mother households in terms of available marriage partners; some groups and some places have a larger or more desirable pool of potential spouses from which to choose.[11] Regardless of the cause of a high proportion of single-mother households, the influence on poverty has to do with potential earnings. Single-earner households make less than dual-earner households. Scholars have also demonstrated that single-mother households face additional challenges due to gender inequality in wages and conflicts between employment and child care.[12] Therefore, like unemployment and underemployment, the proportion of single-mother households in a county signals limited household income.

Geographic Location of Key Factors

The factors most strongly associated with county poverty are not evenly distributed across the state. Figure 1 shows that unemployment is most heavily concentrated in the northern and south-eastern-most parts of the state. Unemployment is especially low in the central-western counties with values as low as 2.2 percent in Calumet County. By comparison, Menominee County had the highest reported unemployment rate in 2000 (16.5 percent). Not coincidentally Menominee County had a poverty rate of 28.3 percent while Calumet County reported a poverty rate of 3.5 percent.

Figure 1

County Unemployment Rate

Percent Unemployed, by Quartile

- 1st Quartile (2.2 - 4%)
- 2nd Quartile (4 - 5%)
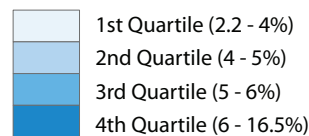- 3rd Quartile (5 - 6%)
- 4th Quartile (6 - 16.5%)

Figure 2 shows that counties with high under-employment are mostly located in the northern counties, in addition to Menominee County and several counties in the central and western parts of the state. Unemployment reflects the proportion of all people in the labor force who are actively searching for but cannot find employment. Underemployment, in contrast, is the proportion of males in the labor force who have found employment, but are not working as many hours as desired. Unemployment and underemployment are strongly associated with higher poverty rates since they limit household earnings.

Figure 2

County Underemployment Rate

Percent of the Male Labor Force Working < 35 hours/week or < 27 weeks/year, by Quartile

- 1st Quartile (15.7 - 19%)
- 2nd Quartile (19 - 21%)
- 3rd Quartile (21 - 25%)
- 4th Quartile (25 - 32.0%)
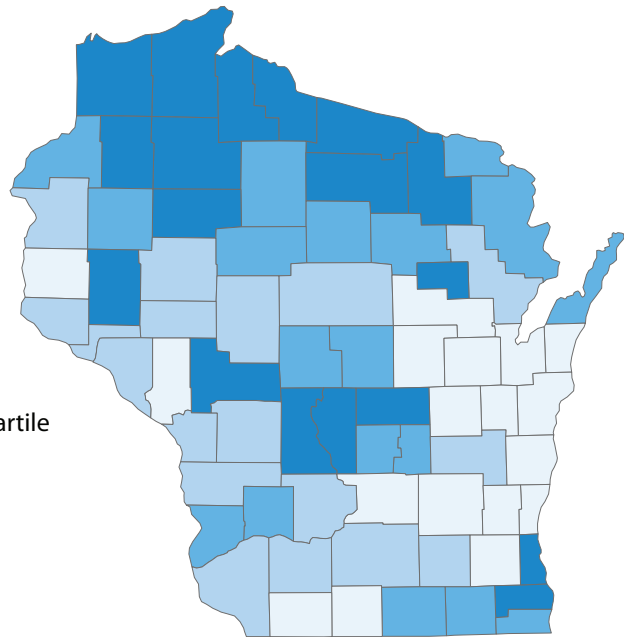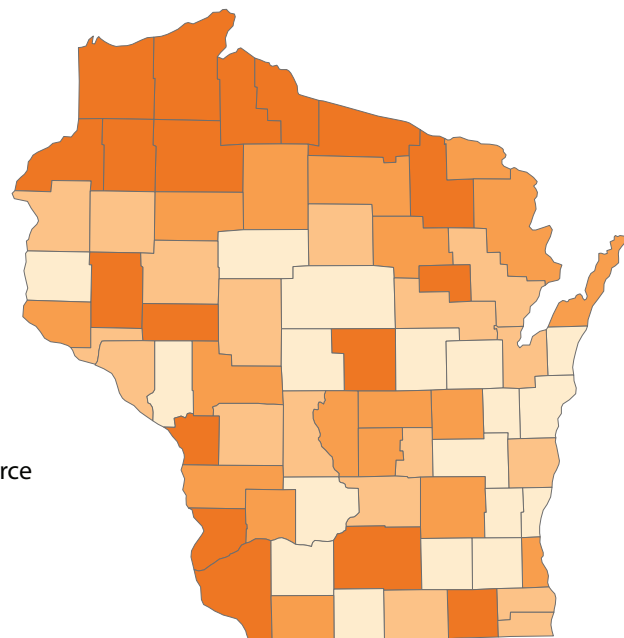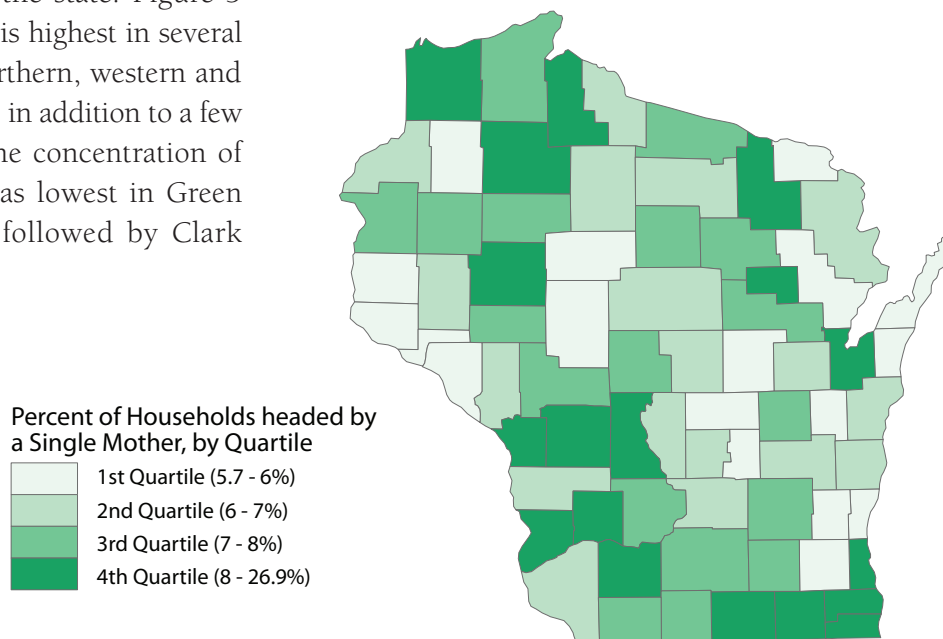
The proportion of family households that are headed by single-mother households is also unevenly distributed across the state. Figure 3 shows that the concentration is highest in several clusters of counties in the northern, western and southeastern parts of the state, in addition to a few counties in the northeast. The concentration of single-mother households was lowest in Green Lake County (5.7 percent) followed by Clark County (6.2 percent).
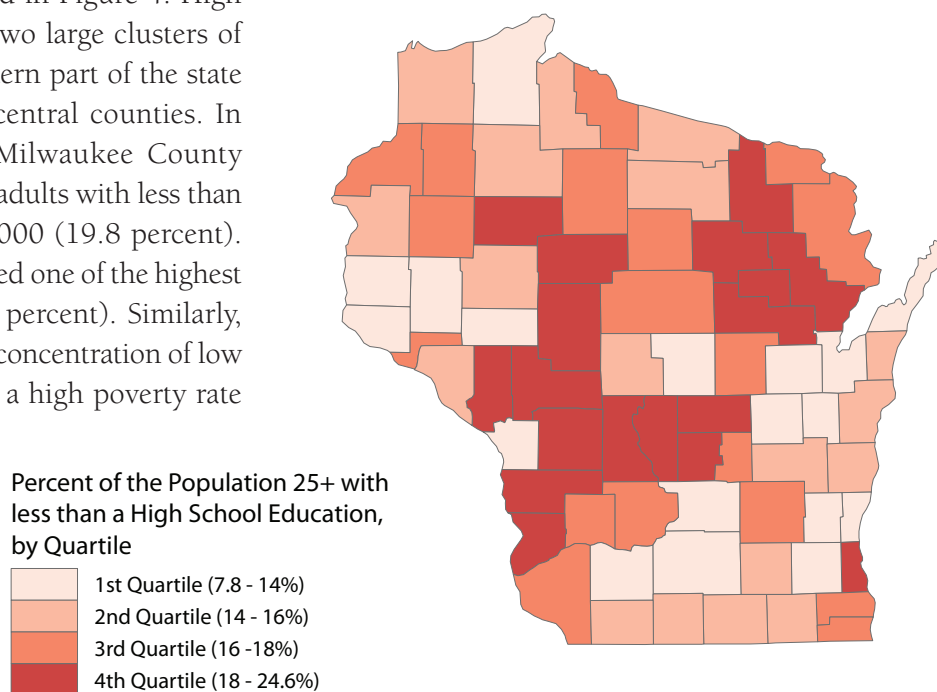
Figure 3

Single-Mother Households

Percent of Households headed by a Single Mother, by Quartile

- 1st Quartile (5.7 - 6%)
- 2nd Quartile (6 - 7%)
- 3rd Quartile (7 - 8%)
- 4th Quartile (8 - 26.9%)

Low education, measured as the proportion of the population 25 years and over with less than a high school education, is illustrated in Figure 4. High concentrations are found in two large clusters of counties: one in the northeastern part of the state and one spanning the west-central counties. In addition to these clusters, Milwaukee County reported a high proportion of adults with less than a high school education in 2000 (19.8 percent). Milwaukee County also reported one of the highest rates of family poverty (14.9 percent). Similarly, Clark County had the highest concentration of low education (24.6 percent) and a high poverty rate (12.5 percent).

Figure 4

Education (Less than High School)

Percent of the Population 25+ with less than a High School Education, by Quartile

- 1st Quartile (7.8 - 14%)
- 2nd Quartile (14 - 16%)
- 3rd Quartile (16 -18%)
- 4th Quartile (18 - 24.6%)

Poverty Typology

We report the values of the key factors for select counties that represent the different poverty types discussed in our first briefing to draw a direct link between the characteristics of a county and its poverty rate. We also include the proportion of the population that belongs to each of the dominant race groups to highlight the complex relationship between race, poverty and the factors associated with poverty.

Table 2 Significant Factors and Racial Composition for Representative Historical Poverty Type Counties				
	Never High Poverty Dane County	Recently High Poverty Milwaukee County	Historically High Poverty Vilas County	Always High Poverty Menominee County
Racial Composition				
% African American	3.9%	24.4%	0.0%	0.4%
% American Indian	0.4	0.9	7.8	81.1
% Asian	3.4	2.4	0.8	3.1
% Hispanic	1.7	3.6	0.6	0.2
% Non-Hispanic White	87.5	62.2	89.4	12.1
Significant Factors				
% Unemployment	3.8	6.9	6.1	16.5
% Underemployment	26.3	23.0	24.9	28.0
% Single-Mother Households	7.3	15.9	7.7	27.0
% Less than High School Education	7.8	19.8	21.8	14.6

There is a clear difference in the racial diversity between the county types. Relative to the "never high poverty" county (Dane County), all other county poverty-types have a considerably higher representation of African Americans, American Indians, and Hispanics. The results of the regression analysis discussed above demonstrate that race is not a cause of poverty. Instead, like race, factors that drive poverty are unevenly distributed across the county poverty types.

For example, unemployment is highest in Menominee County (always high poverty) with a rate that is more than 4 times as high as Dane County (never high poverty) and nearly twice as high as the other county types. Underemployment is more evenly distributed across the county types. Dane County's high rate is due, in part, to the high student population which tends to work only part-time. The proportion of family households that are headed by a single mother is also dramatically higher in Menominee and Milwaukee counties (recently high poverty) as compared to Dane County.

Turning to education, each of the county types that have or have had high poverty has a considerably higher proportion of the adult population without a high school diploma relative to Dane County, which has never had high poverty. In Dane County, under 8 percent of the adult population has less than a high school education. The percentage is nearly twice as high in Menominee County and 12 to 14 percentage-points higher than Dane County in Milwaukee and Vilas counties, respectively.

Further analysis showed that low education was less detrimental in counties with a high American

Indian population.[13] Education is a mark of human capital and economic competitiveness. It matters in places with a labor market structure that requires high education or a competitive labor force. Results suggest that places with high concentrations of American Indians, namely reservations, tend to have labor markets with lower educational demands. Poverty in this context is at least in part an issue of local-area economic development.

Implications

Race is not a cause of poverty. Instead, economic and demographic factors that are unevenly distributed across Wisconsin's race groups are significantly associated with family poverty. For instance, unemployment, one significant factor for poverty, was highest in Menominee County (16.5 percent). This county also reported the highest family poverty rate in 2000 (28.3 percent) and the highest concentration of American Indians (81.1 percent). The relationship between race and poverty is partly due to the prevalence of the structural factor, unemployment. This highlights the importance of local-area economic development for understanding family poverty.

The factors most strongly associated with the prevalence of economic vulnerability among family households are those that limit earnings potential. Unemployment and underemployment reflect limited opportunity for full employment whereas single-mother households are constrained by one income and face the unique challenge of balancing the demands of employment and child-rearing. Low education is a marker of a less competitive labor force.

These results are intended to inform policies and programs that target the factors contributing to family poverty in Wisconsin's counties. The diverse range of poverty among the counties can be understood by the prevalence of the various structural factors. The results do not permit us to speak to the individual-level characteristics that contribute to poverty. Yet they do identify county-level forces that can be addressed by local governments and organizations to ameliorate poverty in their communities, chiefly issues surrounding economic development. An understanding of the dominant structural forces can supplement local knowledge about the distinct confluence of factors facing each county to develop programs that effectively combat area-level poverty which differentially impacts racial minority families.

Endnotes:

[1] Scholarship supporting the individual-causes perspective includes Banfield, Edward. (1968). *The Unheavenly City: The Nature and Future of our Urban Crisis,* Boston: Little Brown and Company; Harrington, Michael. (1962). *The Other America: Poverty in the United States.* New York: Macmillan; and Herrnstein, Richard J. and Charles Murray. 1994. *The Bell Curve: Intelligence and Class Structure in American Life.* New York: The Free Press. See *The Debate over Culture, in Race in the Mind of American* (1999), for a discussion and review of the culture of poverty perspective.

[2] Research supporting the structural-causes perspective includes Duncan, Cynthia and Tickamyer, Ann. (1988). Poverty Research and Policy for Rural America. *American Sociologist,* 19, 243-259; Lichter, Daniel, Zhenchao, Qian and Crowley, Martha. (2005). Child Poverty Among Racial Minorities and Immigrants: Explaining Trends and Differentials. *Social Science Quarterly,* 86, 1037-1059; and Voss, Paul, Long, David, Hammer, Roger and Friedman, Samantha. (2006). County Child Poverty Rates in the US: A Spatial Regression Approach. *Population Research & Policy Review,* 25, 369-391. See Wolf, Jennifer. (2007). Sociological Theories of Poverty in Urban America. *Journal of Human Behavior in the Social Environment,* 16, 41-56 for a full review of the causes of poverty.

[3] Regression analysis compares the patterns of two or more variables, one that is to be explained, the dependent variable, and others that are thought to explain the value of the dependent variable, called independent variables. Technically the results indicate whether the independent variable is correlated with the variance in the dependent variable, where variance represents the different values of the dependent variable observed (e.g., the range in values of county poverty rates). Statistical significance indicates the association is not 0. The value of the coefficient indicates the strength of the association (how different it is from 0). We do not report coefficients here. Instead, we focus on whether there is a statistically significant association and the amount of the variance in county poverty "explained" by the respective structural factor. This approach gives a sense of how effectively the measured factors account for observed variation in county poverty.

Endnotes (continued from page 7)

[4] Because we analyze counties there are added statistical concerns, namely spatial autocorrelation. In general, places close to one another are more alike than places that are far away from one another (see Tobler, Waldo. (1970). A Computer Movie Simulating Urban Growth in the Detroit Region. *Economic Geography,* 46, 234-240). The interdependence, or relationship, between the county units may affect our tests of statistical significance. We have conducted appropriate tests on the remaining interdependence among our units of analysis after statistically controlling for structural factors. Tests suggest that the results presented here are not significantly affected by the fact that places near each other are more similar than those that are far away from each other; the spatial distribution of the structural factors aligns with the spatial distribution of poverty.

[5] Table 1 reports results from a model that includes all of the structural characteristics simultaneously. It shows which factors are significantly related to poverty in Wisconsin. We describe how we measure each variable here. The race composition variables were constructed by dividing the number of individuals counted as African American, American Indian, Asian or Hispanic by the total population for each county. The African American, American Indian and Asian counts exclude Hispanics. Individuals of Hispanic origin can be of any race. Next, the state average proportion for each racial category was used to identify counties with an above or below average concentration. Unemployment was calculated according to the official definition which reports the proportion of individuals in the labor force who are not working but are actively searching for work. Underemployment, in this study, is the proportion of males aged 16 and over working less than 35 hours per week and/or less than 27 weeks per year; underemployment represents the proportion of the male working age population that is working but not working full time. Unemployment and underemployment are similarly related to poverty and are highly related measures. Therefore, they were treated as a combined factor for simplicity of analysis. The other economic structure variables, manufacturing, FIRE (finance, insurance and real estate), service and other professional industries, were calculated by dividing the number of people employed in each industry by the total labor force. Farming is the proportion of the total population that lives on a farm. The single-mother variable represents the proportion of all households headed by a single female with children under the age of 18 in the household relative to all family households in the county. The size of the retirement age population is estimated by dividing the number of individuals aged 65 and over by the total county population. Similarly, the relative size of the foreign-born population is calculated by dividing the number of individuals not born in the United States by the total population. The disabled proportion is the number of disabled individuals divided by the working age population (the total 16 years and over population). Finally, the less than high school variable measures the proportion of the population 25 years and over with less than a high school education.

[6] The average unemployment rate for a county in Wisconsin is 5 percent, whereas the average underemployment is 22 percent. While the rates are different, they have a similar association with poverty. The strength of the relationship between unemployment and family poverty is 0.75 and underemployment's association is 0.53. Although we speak about them separately throughout the report because they are distinct concepts, they are combined in the statistical analysis because of their similar statistical associations with family poverty.

[7] The following is a selection of academic articles on worker motivation: Baum, Scott, Bill, Anthea and Mitchell, William. (2008). Labour underutilization in metropolitan labour markets in Australia: Individual characteristics, personal circumstances and local labour markets. *Urban Studies,* 45, 1193-1216; Benati, Luca. (2001). Some empirical evidence on the 'discouraged worker' effect. *Economics Letters,* 70, 387-395; Pang, Mary, Lang, Graeme and Chiu, Catherine. (2005). De-industrialization and the 'disappeared workers'. *International Journal of Human Resource Management,* 16, 772-785; and van Ham, Maarten, Mulder, Clara and Hooimeijer, Pieter. (2001). Local underemployment and the discouraged worker effect. *Urban Studies,* 38, 1733-1751.

[8] During the peak of manufacturing in the United States, namely 1960-1980, the average county in Wisconsin had a quarter of its labor force employed in the manufacturing industry at 25, 26 and 24 percent in 1960, 1970 and 1980, respectively.

[9] For research on the working poor, see Chilman, Catherine. (1991). Working poor families: Trends, causes, effects, and suggested policies. *Family Relations,* 40, 191-198; Haynie, Dana and Gorman, Bridget. (1999). A gendered context of opportunity: Determinants of poverty across urban and rural labor markets. *Sociological Quarterly,* 40, 177-197; and Terry, Sylvia. (1983). Work experience, earnings, and family income in 1981. *Monthly Labor Review,* 106, 13-20.

[10] See, for example, Murray, Charles. (1984). *Losing Ground: American Social Policy,* 1950-1980. New York: Basic.

[11] See McLoyd, Vonnie. (1990). The impact of economic hardship on black families and children: Psychological distress, parenting and socioemotional development. *Child Development,* 61, 311-346; and Wilson, William Julius (1987). The truly disadvantaged: The inner city, the underclass, and public policy. Chicago: University of Chicago Press.

[12] The following academic articles address specific employment challenges facing single-mother households: Han, Wenjui and Waldfogel, Jane. (2001). Child care costs and women's employment: A comparison of single and married mothers with pre-school-aged children. *Social Science Quarterly,* 82, 552-568; Huffman, Matt. (2004). Gender inequality across local wage hierarchies. *Work & Occupations,* 31, 323-344; and Park, Jung Min. (2005). The roles of living arrangements and household resources in single mothers' employment. *Journal of Social Service Research,* 31, 49-67.

[13] A test for an interactive association between American Indian concentration and education was statistically significant. The coefficients indicate that the relationship between education and poverty was weaker in places with a high American Indian population.

Briefing 3　　**County Factors Related to Wisconsin Poverty, 2000**

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