#### IOWA STATE UNIVERSITY University Extension





# Child Poverty in Iowa 1969-2009

One of the most distressing faces of poverty is that of poor children, who often experience the brunt of poverty's negative effects for a lifetime. Previous research has found that growing up poor increases the odds of having lower health and social outcomes, both in childhood and into adulthood (Cancian and Danziger 2009; Duncan and Brooks-Gunn 1997). Poor children tend to have lower educational and cognitive outcomes, hurting their chances of obtaining the necessary qualifications for skilled jobs. Poor children are at increased risk of developing behavioral and emotional problems, leading to mental health issues later in life. Poor children often have more health problems into adulthood, typically caused by lack of healthcare, poor nutrition, inadequate prenatal care, and sometimes exposure to environmental hazards. As a result of the above factors, poor children are much more likely to become poor adults, continuing a cycle of poverty. Therefore, addressing child poverty is an important policy issue.

The purpose of this publication is to inform state and local policy makers about the trends in child poverty, the socioeconomic characteristics of poor places, and the potential implications it has for Iowa. Data for this analysis are taken from the 1970-2000 Decennial Censuses and the 2005-09 American Communities Survey. Further information on the data and statistical methods is presented in the appendix.

### **Child Poverty Today**

Currently in Iowa, 13.5 percent of the state's children live in families whose incomes fall below the poverty level. Iowa's rate is much lower than the national child poverty rate of 18.2 percent. Although rates are low, child poverty has grown in Iowa over the last several decades. Child poverty in Iowa grew 3.5 percent between 1969 and 2009, which was slightly faster than the national growth rate of 3.1 percent. However, over the last decade child poverty rates grew much faster than the national average, jumping by 3.1 percent in Iowa compared to 2.1 percent nationally.

Over the past 40 years, child poverty in Iowa peaked in 1989 to nearly 14 percent as a result of the Farm Crisis and recession in the 1980s. By contrast, large reductions in child poverty occurred in the booming economy of the Iowa's child poverty rate was 13.5% in 2009.

The national child poverty rate was 18.2% in 2009.

1990s, when the rate dropped to 10.5 percent. However, the decade of the 2000s has seen two recessions that have wiped-out the gains made in the 1990s, and sent child poverty rates back to levels seen during the 1980s.

Within Iowa there are some key differences in child poverty rates. In general, child poverty in rural areas has declined while it has grown in Iowa's urbanized areas. Over 40 years ago in 1969, rural areas had the highest rates of child poverty (13.0%), while micropolitan (9.3%) and metropolitan (8.4%) areas had much lower rates. By 2009 this had flipped with micros (15.5%) and metros (13.4%) having the highest rates of child poverty, and rural areas having the lowest rates (12.7%). In fact, over the last 40 years, child poverty grew by 6.2 percent in micros and 5.0 percent in metros, but remained essentially unchanged in rural areas (-0.3%). Even during the two recessions of the 2000s, child poverty grew more slowly in rural areas (1.9%) compared to micro (3.6%) and metro (3.5%) areas. Clearly, growth in child poverty in Iowa has been driven by increases in the state's urban areas. Refer to figure 1.

In 2009 there were 93.672 Iowa children living in poverty, and most lived in metropolitan areas. Metro areas accounted for 56 percent (52,326) of the state's poor children, while only 25 percent (23,118) lived in rural Iowa. This is very different from 1969, when 43 percent of poor children lived in rural areas and 40 percent in metro areas. Reflecting this change, there has been a 33.0 percent increase in the number of poor children living in metro areas between 1969-2009, while there has been a corresponding decrease of -45.5 percent in rural areas. The shares of poor children living in micropolitan areas have not changed much over the past four decades. However, the number of poor children in micros grew by over 20 percent over the last 10 years. Refer to figure 2.



Figure 1. Child poverty rates in Iowa and the United States between 1969-2009



93,672 Iowa children lived in poverty in 2009.

Child poverty in Iowa tends to be spatially clustered in four main areas (refer to figure 3). First, child poverty is the highest and most persistent in southeastern Iowa including Davenport, suburban Iowa City, Burlington, Keokuk – Fort Madison, Muscatine, and Ottumwa. Second, several rural counties in southern and west-central Iowa have high rates of child poverty. Third, rates are also high in the smaller metropolitan areas of Sioux City, Waterloo, and their surrounding counties. Lastly, child poverty



56% of poor children lived in metro areas.

#### Child poverty is highest in urban and rural areas of southeastern Iowa.

is prevalent in some micropolitan areas in north-central Iowa including Fort Dodge, Marshalltown, and Mason City.

By contrast, child poverty is lowest in the rural counties of northwest Iowa. Ames is the only core metropolitan county to have low rates of child poverty. Suburban areas of the state's metros also have low rates, especially in suburban Council Bluffs, Des Moines, and Waterloo. Interestingly, Davis County in southeast Iowa has one of the lowest rates of child poverty, despite being surrounded by counties with some of the highest rates.

The highest and lowest child poverty counties are presented in table 1. Looking specifically at Iowa's metropolitan areas (urban areas of 50,000 or more), child poverty rates are highest in Sioux City (21.0%), Waterloo – Cedar Falls (19.4%), suburban Iowa City (19.3%), and Davenport (16.7%); and are the lowest in suburban areas of Council Bluffs and Des Moines. For micropolitan areas (urban areas of 10,000 to 50,000), the highest child poverty is found in Ottumwa (20.3%), Keokuk – Fort Madison (19.0%), Marshalltown (18.4%), Burlington (18.2%), and Muscatine (17.8%); and are lowest in Spirit Lake (7.9%) and Pella (8.5%).

However, there are important differences in child poverty rates within counties that are not evident when looking at county rates. Census tracts allow us to see these differences within counties to gain a more accurate understanding of how child poverty is spatially distributed (refer to figure 4). In high child poverty counties, poor children tend to be concentrated in the county's core urbanized centers, and not in less populated areas of the county. For example, Muscatine County has one of the highest child poverty

	Highest in 2009		Lowest	in 2009
	Pct	Name	Pct	Name
Rural	23.4	Van Buren	4.5	Sioux
	23.2	Cass	4.8	Davis
	23.1	Union	5.0	Cherokee
	21.4	Appanoose	5.4	Plymouth
	21.0	Jefferson	5.4	Lyon
Micropolitan	20.3	Wapello (Ottumwa)	7.9	Dickinson (Spirit Lake)
	19.0	Lee (Keokuk-Ft. Madison)	8.5	Marion (Pella)
	18.4	Marshall (Marshalltown)	11.1	Mahaska (Oskaloosa)
	18.2	Des Moines (Burlington)	11.3	Clay (Spencer)
	17.9	Muscatine (Muscatine)	12.0	Jasper (Newton)
Metropolitan	21.0	Woodbury (Sioux City)	6.1	Mills (Council Bluffs)
	19.4	Black Hawk (Waterloo)	6.3	Bremer (Waterloo)
	19.3	Washington (Iowa City)	7.0	Dallas (Des Moines)
	16.7	Scott (Davenport)	8.0	Warren (Des Moines)
	15.3	Pottawattamie (Council Bluffs)	8.7	Guthrie (Des Moines)

#### Table 1. Highest and lowest child poverty counties in lowa, 2009.

SOURCE: 1970-2000 Census and 2005-09 ACS, U.S. Census Bureau.

Child poverty is highest in rural areas of southern and west-central Iowa.



IOWA STATE UNIVERSITY

Figure 4. Child poverty rates by census tract in Iowa, 2009

rates in Iowa. However, poor children are almost exclusively concentrated in one part of the city of Muscatine; and child poverty rates are very low in the remaining areas of the county. This indicates that low poverty areas exist within high poverty counties.

High (over 16%)

Conversely, many low child poverty counties have concentrations of poor children within their boundaries. For example, Dallas County in suburban Des Moines has one of the lowest rates of child poverty. However, the northwest part of the county has large numbers of poor children. Thus, looking only at county rates gives a false impression of prosperity across the entire county, and makes these small geographic pockets of poverty "statistically invisible."

Although identifying areas of high and low child poverty provides useful information, it does not allow for a broader understanding of the socioeconomic factors that may contribute to child poverty. The analysis below compares key demographic and economic variables across low and high child poverty counties in Iowa, and discusses statistically significant differences (statistical methods are presented in the appendix).

First looking at demographics, we find that high child poverty counties (rates over 16 percent) tend to have larger numbers of minorities (7.5% vs. 4.9%) and more families headed by a single parent (20.0% vs. 15.3%), compared to low child poverty counties. Educational attainment is also lower, with high school drop-outs accounting for 12.2 percent of the population in high child poverty counties, compared to 10.7 percent for low counties. Surprisingly, there is no difference in the numbers of college educated people in high and low poverty areas. Refer to table 2.

Next, looking at economic factors, high child poverty areas have higher rates of unemployment (5.6% vs. 4.2%), lower rates of Child poverty is highest in smaller metros of Sioux City and Waterloo.

Child poverty is highest in north-central micros of Fort Dodge, Marshalltown, and Mason City.

	Child Poverty Counties 2						
Percent of Population	Low (<10%)	Average (10-16%)	High (>16%)				
Population	32,185	22,036	30,938				
Minority population	4.95 <sup>H</sup>	6.30	7.46 <sup>L</sup>				
Single-headed families	15.33 <sup>HA</sup>	17.24 <sup>HL</sup>	19.98 <sup>AL</sup>				
College population	5.67	4.58	4.84				
No high school degree	10.68 <sup>HA</sup>	12.79 <sup>L</sup>	12.23 <sup>L</sup>				
College degree or higher	19.85 <sup>A</sup>	15.92 <sup>L</sup>	17.78				
Labor force participation	68.05 <sup>H</sup>	66.28	65.44 <sup>L</sup>				
Unemployment	4.24 <sup>H</sup>	4.75 <sup>H</sup>	5.65 <sup>AL</sup>				
Per capita income (nom\$)	\$24,175 <sup>HA</sup>	\$22,139 <sup>L</sup>	\$22,662 <sup>L</sup>				
Percent of Employed Population							
Agriculture & natural resources	7.40	8.02	6.67				
Construction	6.92	6.92	6.41				
Manufacturing	16.96	18.40	18.56				
Trade	14.65	15.38	15.08				
Transport, communication, utilities	7.01	7.10	7.07				
Finance, insurance, real estate	5.92H	4.75	4.36L				
Professional, educ., health services	25.57	24.24	25.21				
Leisure, business, other services	12.41	12.39	13.35				

NOTE: Significant difference between low (L), average (A) an high (H) child poverty rates at p<0.05 using Bonferroni's test. Leisure industry includes art, entertainment, recreation, accommodation, and food services. MANCOVA controls for population differences. SOURCE: 2005-09 ACS, U.S. Census Bureau.

participation in the labor force (65.4% vs. 68.1%), and lower incomes (\$22,662 vs. \$24,175). There are no major differences in the types of job opportunities present in low and high child poverty counties, except for one. Low child poverty counties have more people employed in finance, insurance, and real estate jobs than did high counties (5.9% vs. 4.4%).

### Changes in Child Poverty

Although Iowa's base rates of child poverty are low, they have been growing much faster than the national average for the last 40 years. This growth in child poverty has been occurring in Iowa's urban areas. Between 1969 and 2009 child poverty in the United States grew by 3.1 percent. However, over this same period child poverty grew by 6.2 percent in Iowa's micropolitan areas and 5.0 percent in its metropolitan areas. By contrast, child poverty in rural Iowa over the last four decades remained essentially unchanged. During the last two recessions in the 2000s, child poverty grew by 2.1 percent nationally, and again Iowa's micro (3.6%) and metro (3.5%) areas had faster rates of growth. Even rural Iowa posted gains in child poverty, which grew by 1.9 percent and was close to the national rate. Refer to figure 5.

Over the last 40 years child poverty in Iowa grew by 3.5%, slightly faster than the national growth rate of 3.1%.

# Since 1969 child poverty grew by...

- 6.2% in micros,
- 5.0% in metros, and
- remained unchanged in rural areas at -0.3%.

#### Table 2. Characteristics of low and high child poverty counties in lowa, 2009.



Figure 5. Change in child poverty rates in Iowa and the United States between 1969-2009

Looking at change over the last four decades, growth in child poverty was concentrated in three main areas of Iowa (refer to figure 6). First, child poverty grew the fastest in a swath of southeastern counties and urban areas. This includes Davenport, suburban Iowa City (Washington), Clinton, Muscatine, Burlington, Keokuk – Fort Madison, Ottumwa, and several surrounding rural counties.



Over the last 10 years, child poverty in Iowa grew by 3.1%, faster than the national growth rate of 2.1%.

Since 1999 child poverty grew by...

• 3.6% in micros,

• 3.5% in metros, and

• 1.9% in rural areas.

Child poverty grew fastest in urban and rural parts of southeast Iowa.

Child poverty grew fastest in metropolitan Iowa, especially Waterloo, Sioux City, Des Moines, Cedar Rapids, and Council Bluffs. Next, child poverty also jumped in Iowa's metropolitan areas, especially Waterloo – Cedar Falls, Sioux City, Des Moines, Cedar Rapids, and Council Bluffs. Lastly, several northern and central micropolitan areas experienced growth in child poverty including Marshalltown, Storm Lake, Fort Dodge, and Mason City. Few rural counties experienced sizable gains in child poverty.

Conversely, since 1969 child poverty dropped in many rural counties across Iowa. Sizable reductions in child poverty occurred in northwestern and northeastern counties, and to a lesser extent in some south-central counties. In addition, child poverty fell in Pella and Oskaloosa in central Iowa.

As stated before, looking at subcounty Census tracts often reveals important differences in child poverty rates within counties (refer to figure 7). In many counties child poverty was growing in urbanized centers, while the remaining sections of the county had smaller growth or even declines. For example, in Marshall County growth in child poverty was concentrated in the city of Marshalltown, while the southwest part of the county experienced sizable declines. Conversely, child poverty can also grow within counties with declining rates. For example, in Marion County child poverty dropped all over the county, except in the city of Pella where it posted large gains. This indicates that sizable gains in child poverty are occurring adjacent to areas with sizable declines, and vice versa.

Counties with the fastest gains and fastest declines in child poverty over the last four decades are presented in table 3. Most metropolitan areas experienced gains in child poverty since 1969, with the largest jumps occurring in Sioux



1979-2009

#### Table 3. Growing and declining child poverty counties in lowa between 1969-2009.

	Growing	1969-2009	Declining 1	969-2009
	Pct	Name	Pct	Name
Rural	13.1	Cass	-12.2	Davis
	12.5	Jefferson	-11.2	Adams
	12.3	Henry	-10.3	Allamakee
	9.9	Union	-10.0	Delaware
	9.2	Montgomery	-9.4	Sioux
Micropolitan	11.1	Marshall (Marshalltown)	-5.8	Mahaska (Oskaloosa)
	11.0	Des Moines (Burlington)	-4.4	Marion (Pella)
	10.5	Muscatine (Muscatine)	-2.1	Dickinson (Spirit Lake)
	9.9	Louisa (Muscatine)	2.5	Clay (Spencer)
	9.5	Worth (Mason City)	3.5	Jasper (Newton)
Metropolitan	12.1	Washington (Iowa City)	-3.9	Madison (Des Moines)
	10.5	Black Hawk (Waterloo)	-3.1	Bremer (Waterloo)
	10.0	Woodbury (Sioux City)	-3.0	Guthrie (Des Moines)
	8.1	Scott (Davenport)	-0.1	Clay (Spencer)
	6.4	Linn (Cedar Rapids)	0.1	Jasper (Newton)

SOURCE: 1970-2000 Census and 2005-09 ACS, U.S. Census Bureau.

City (10.0% gain), Davenport (8.1% gain), and Waterloo – Cedar Falls (8.0%); and declines in Madison (-3.9%), Bremer (-3.1%), and Guthrie (-3.0%). Similarly, nearly all of Iowa's micropolitan areas saw gains in child poverty, with the largest happening in Marshalltown (11.1% gain), Burlington (11.0% gain), Muscatine (10.5% and 9.9% gain), and Mason City (9.5% gain). The only



Child poverty grew fastest in northern micropolitan areas of Marshalltown, Storm Lake, Fort Dodge, and Mason City.

Decade of the 2000s sent child poverty rates back to their peak during the Farm Crisis of the 1980s. Micropolitan areas have the highest and fastest growing child poverty rates. micros to have drops in child poverty were Oskaloosa (-5.8% drop), Pella (-4.4% drop), and Spirit Lake (-2.1% drop).

Looking at more recent changes in child poverty over the last decade, we see that very few counties in Iowa experienced declines and many saw growth in child poverty (refer to figures 8 and 9). Consistent to what has been discussed previously, child poverty since 1999 grew in a cluster of southeastern counties including Muscatine, suburban Iowa City (Washington), Keokuk -Fort Madison, and adjacent rural counties. Child poverty over the last decade also grew in the state's smaller metropolitan areas, notably Sioux City, Waterloo - Cedar Falls, north suburban Council Bluffs, and east suburban Cedar Rapids (Jones). The micropolitan areas of Mason City and Boone

experienced sizable gains in child poverty. Lastly, rural counties in central and west-central Iowa also saw their rates of child poverty jump over the last 10 years. The fastest growing and declining counties between 1999 and 2009 are presented in table 4.

So what factors might have driven changes in child poverty? To answer this question, changes in key demographic and economic variables are examined across declining and growing child poverty counties (refer to table 5). First looking at demographics, growing child poverty counties (more than 2% gain) tended to have faster growth in minorities (3.0% gain vs. -0.5% loss) and faster growth in single-headed families (11.0% vs. 6.6% gain), compared to declining counties. In addition, areas with growing rates of child poverty also tended to have



Figure 9. Change in child poverty rates by census tract in Iowa between 1999-2009

Minority populations were associated with child poverty, especially immigrant populations.

#### Table 4. Growing and declining child poverty counties in lowa between 1999-2009.

	Growing 1	999-2009	Declinir	ng 1999-2009
	Pct	Name	Pct	Name
Rural	9.4	Van Buren	-7.9	Davis
	9.3	Union	-7.8	Lucas
	8.8	Cass	-6.8	Mitchell
	8.7	Monona	-5.4	Page
	8.6	Jefferson	-4.7	Cherokee
Micropolitan	8.1	Worth (Mason City)	-0.5	Mahaska (Oskaloosa)
	7.2	Muscatine (Muscatine)	-0.2	Marion (Pella)
	6.9	Boone (Boone)	0.3	Clay (Spencer)
	6.4	Lee (Keokuk-Fort Madison)	0.7	Clinton (Clinton)
	5.5	Cerro Gordo (Mason City)	0.9	Des Moines (Burlington)
Metropolitan	9.0	Washington (Iowa City)	-4.2	Mills (Council Bluffs)
	7.3	Woodbury (Sioux City)	-0.3	Guthrie (Des Moines)
	5.7	Grundy (Waterloo)	0.9	Dallas (Des Moines)
	5.2	Harrison (Council Bluffs)	1.6	Warren (Des Moines)
	5.1	Jones (Cedar Rapids)	1.9	Johnson (Iowa City)

SOURCE: 1970-2000 Census and 2005-09 ACS, U.S. Census Bureau.

slower declines in the number of high school drop-outs (-30.2% vs. -34.8% loss). Interestingly, stable child poverty counties saw a small increase in the number of enrolled college students (0.2%), while enrollments dropped in declining (-2.2%) and growing (-3.1%) child poverty counties.

In terms of economic factors, counties with declining child poverty saw their rates of labor force participation increase by 13.7 percent, which was faster than the 10.7 percent participation rate for growing child poverty counties. Surprisingly, unemployment did not differ significantly between declining and growing counties; and in fact, stable child poverty counties had the highest unemployment rate. As expected, growing child poverty counties saw their incomes grow more slowly (728.5%) than declining child poverty counties (825.1%), indicating lagging incomes.

Next looking at employment opportunities, growing child poverty counties had faster growth in leisure and business services (6.6% vs. 5.4% gain), indicating the creation of generally lower skilled and lower wage jobs. Counties that had more poor children also did not shed agricultural jobs as quickly as those that had less poor children (-10.9% vs. -18.4% loss), indicating that stemming losses in farm jobs was not associated with reductions in child poverty. By contrast, counties that had declines in child poverty experienced faster growth in transportation, communications, and public utilities jobs (2.5% vs. 1.3% gain). Further, declining child poverty counties had sizable gains in manufacturing jobs (5.5%), while growing areas saw losses (-1.3%). Thus, creation of more skilled and better paid jobs in manufacturing, transport, and utilities was associated with declining rates of child poverty.

Single-headed families were associated with child poverty, reflecting the hardship of providing and caring for children alone.

Low educational attainment was associated with child poverty, limited the ability of parents to obtain better paying skilled jobs.

# Table 5. Characteristics of declining and growing child poverty counties in Iowa between 1969-2009.

	Child Poverty Growth Counties 1969					
Percent of Population	Declining (>2%)	Stable (-2% to 2%)	Growing (>2%)			
Minority population $\Delta$	-0.49 G	1.21	2.97 D			
Single-headed families $\Delta$	6.62 GS	9.06 GD	10.98 SD			
College population $\Delta$	-2.20	<b>0.20</b> G	-3.06 S			
No high school degree $\Delta$	-34.84 G	-33.07 G	-30.19 SD			
College degree or higher $\Delta$	10.95	12.44	11.24			
Labor force participation $\Delta$	13.72 GS	10.74 D	10.68 D			
Unemployment $\Delta$	1.26 S	2.11 D	1.57			
Per capita income $\Delta$ (percent, nom\$)	825.12 G	804.11 G	728.50 SD			
Change in Employed Population 1969-2009						
Agriculture & natural resources $\Delta$	-18.37 G	-18.38 G	-10.91 SD			
Construction $\Delta$	1.35	1.79	1.26			
Manufacturing $\Delta$	5.51 G	2.89 G	-1.31 SD			
Trade Δ	-6.02	-5.68	-6.07			
Transport, communication, utilities $\Delta$	2.46 <sup>G</sup>	1.73	1.27 <sup>D</sup>			
Finance, insurance, real estate $\Delta$	2.13	3.06 G	1.62 <sup>S</sup>			
Professional, educ., health, services $\Delta$	7.69	8.67	7.80			
Leisure, business, other services $\Delta$	5.44 G	5.93	6.61 <sup>D</sup>			

NOTE: Significant difference between declining (D), stable (S) and growing (G) child poverty rates at p<0.05 using Bonferroni's test. Leisure industry includes art, entertainment, recreation, accommodation, and food services. MANCOVA controls for population differences. SOURCE: 1970 Census and 2005-09 ACS, U.S. Census Bureau.

### Summary and Implications for lowa

The trends in child poverty and the socioeconomic characteristics of these poor places suggest some possible implications for Iowa communities. In terms of *major* trends, Iowa's rates of child poverty are growing faster than those nationally, although the base rates of child poverty are still below the U.S. average. The two recessions during the last decade, especially the Great Recession of 2008, impacted child poverty in Iowa just as severely as the Farm Crisis did in the 1980s. In short, the gains of the 1990s that reduced child poverty rates from their peak levels in the 1980s have been lost. The 2000s have been a "lost decade" for improving the economic wellbeing of Iowa's children.

Child poverty is a pressing problem in many of Iowa's micropolitan areas. Rates of child poverty are the highest and fastest growing in these smaller urban areas. Although rates are high, the actual number of poor children in micropolitan areas is low compared to rural and especially metropolitan areas of Iowa. This may mean less state and federal funding is directed to these distressed micros because of low numbers, even though the concentration of poor children is high. Relatedly, the numbers of poor children are shifting to Iowa's metropolitan areas. There has been a large increase in the number of poor children in metro areas and a corresponding large drop in rural Iowa. This means more demand for services in metro Iowa, which may lead to a future metro bias in program de-

Jobs in manufacturing, transportation, communications, and utilities tend to reduce child poverty. livery, funding, and political support. Rural programs addressing child poverty will likely have to serve a smaller and declining clientele over large geographic areas.

In terms of *demographic character*istics, child poverty in Iowa is associated with larger and growing minority populations. In most of Iowa this typically means Hispanics, both from domestic and international migration, and to a lesser extent immigrants from Africa and Asia. Immigrants to Iowa may have limited English ability, limited skills or unrecognized educational qualifications, and larger families. These factors contribute to lower family incomes that may fall below the poverty line given the size of the family, resulting in more children in poverty. By all accounts, this demographic will continue to grow in the future and will become an important part of Iowa's culture and economy, especially in the state's urbanized areas. Programs addressing child poverty will need to be culturally sensitive and language specific to be effective.

The economic hardship of providing and caring for children as a single parent is well documented in the poverty literature (Partridge and Rickman 2006). Consistent with this research. in Iowa we find that larger and increasing numbers of single-headed families are associated with higher and growing rates of child poverty. In essence, the presence of two adults in a family increases wage income and allows for greater sharing of family responsibilities. This aspect of poverty is already well understood by most social service agencies, and there is an array of programs focusing on child care

access, parenting and household skills, and how to manage worklife balance. However, addressing this issue has been problematic because of limited funding, differences in program availability across places (especially child care), and wavering public support based on different sets of social values.

Lastly, in terms of economic characteristics, one of the best ways to reduce child poverty is through education, both of children themselves and their parents. Counties with higher and growing child poverty also tend to have more high school drop-outs. Surprisingly, areas with more college educated people did not have lower rates of child poverty. This suggests that policy efforts should focus on high school graduation and GEDs, which is a necessary credential for any type of employment and any future education or training. Alternative education programs for children provide a pathway out of poverty for at-risk youth, reducing their likelihood of being poor as adults. Adult education and training programs for parents who have left school are equally important. Enhancing the skills and education of parents will likely lead to their obtaining higher-skill and higher-paid jobs, which will lift families and children out of poverty.

The best way to reduce the number of poor children is to provide good employment opportunities for their parents. However, not all jobs are created equal in terms of their pay, benefits, and stability. Previous research has shown that jobs in lower-skill service industries actually do less to reduce poverty than jobs in high-skill serJobs in leisure and business services tend to increase child poverty. vice and goods-producing industries (Peters 2009). The quality of the jobs matter as much as the quantity. This analysis finds that counties experiencing declines in child poverty were ones that also added jobs in manufacturing, transportation, communications, and utilities – jobs that typically require moderate skills, are fulltime and full-year, and pay above average wages and benefits. By contrast, counties with growing child poverty also added jobs, but these were in leisure (e.g., entertainment, accommodation, food, and personal services) and business services industries - jobs that typically require limited skills, are temporary and part-time, pay below average wages, and offer few benefits. Jobs directly engaged in agricultural production do not appear to reduce child poverty. Agricultural production will continue to be an important source of new wealth and tax revenues for the state, but it will not be a major source of new jobs. Agriculture will play only an indirect role by creating demand for manufacturing and transportation jobs in other economic sectors.

State and local economic development programs can help reduce child poverty in Iowa by focusing their efforts on expanding and attracting jobs that meet certain criteria. At first, jobs should be moderately skilled so they are accessible to poor persons with limited education and training. Then, jobs should pay above average

wages and offer benefits, which increase the wealth and health of the family. Finally, jobs should be full-time and full-year so families have stable incomes. Development efforts should be targeted at industries that are growing nationally, or to those in which the state or region has a competitive advantage. The challenge, of course, is creating these quality jobs in areas that have experienced population and economic declines. However, the alternative is to continue a cycle of poverty stretching from childhood into adulthood, which over time may erode Iowa's economic and social quality of life.

#### References

Cancian, M. and S. Danziger. 2009. *Changing Poverty, Changing Policies*. New York: Russell Sage Foundation.

Duncan, G. and J. Brooks-Gunn. 1997. *Consequences of Growing Up Poor*. New York: Russell Sage Foundation.

Partridge, M. and D. Rickman. 2006. *The Geography of American Poverty: Is There a Need for Place-Based Policies*. Kalamazoo, Mich.: Upjohn Institute.

Peters, D. 2009. "Typology of American Poverty." *International Regional Science Review* 32: 19-39.

# **Appendix – Statistical Methods**

Child poverty is measured as the number of children under 18 years of age who live in families whose income falls below the poverty threshold. To determine whether a family is in poverty, the U.S. Census uses set income thresholds that vary by family size. If a family's total income is less than the threshold, then that family and all individuals within it are in poverty. Family income includes wage and self-employment earnings, retirement and Social Security, dividends and interest, unemployment and workers' compensation, child support, Supplemental Security Income, and public assistance. It does not include non-cash benefits like food stamps, housing assistance, or state-funded health care.

Income thresholds are set by the federal government and are adjusted for inflation each year. However, the thresholds do not account for cost of living differences across locations. In 2009, for example, a two-person family in poverty would earn less than \$13,991, a three-person family less than \$17,098, and a four-person family in poverty would earn less than \$21,954. Although poverty thresholds are calculated to reflect basic food needs, they are intended to be used as a statistical yardstick to measure economic well-being, and not as a complete description of what families need to be self-sufficient.

Although the ACS has replaced the Decennial Census long-form data, there are some important differences between the two that should be noted. First, ACS data represent average values for each year between 2005-09, rather than point-in-time estimates. Second, income and employment status are for the previous 12 month period, rather than for the previous calendar year. Third, standard errors for the ACS tend to be higher for smaller geographies than was the case in previous census periods. However, analysis of the standard errors finds no estimate whose coefficient of variation exceeds 25 percent, indicating adequate data quality.

Census tracts are small and relatively permanent subdivisions of a county. They typically contain between 3,000 and 8,000 people. Tracts are delineated by local partners and the Census Bureau to approximate neighborhoods and communities.

To identify significant differences between counties across key demographic and economic characteristics, multivariate analysis of covariance (MANCOVA) is used to test for mean differences using Bonferroni's multiple comparison test and controlling for population differences. The matrix form of the MANCOVA model is presented in equation 1, where Y is the matrix of socioeconomic variables, M is the matrix of linear transformations or estimable functions, X is the matrix of child poverty categories, Z is the matrix of population covariates, B and  $\Gamma$  are matrices of regression coefficients, and E is the matrix of residuals. Bonferroni's test is presented in equation 2, where  $\bar{x}$  are the means, s<sup>2</sup> is the mean of squared errors, n is the number of cases, t is the critical value,  $\alpha$  is alpha level, v is the degrees of freedom, and k is the number of comparisons.

(1) 
$$YM = XB + Z\Gamma + E$$

(2) 
$$B \quad \frac{\overline{x}_i - \overline{x}_j}{\sqrt{s^2 \left(\frac{1}{n_i} + \frac{1}{n_j}\right)}} \ge t \left(\frac{2\alpha}{k \ k - 1}, \nu\right)$$

# **Appendix – Child Poverty Rates, 1969-2009**

	Child Poverty Rates					Cha	Change	
_	1969	1979	1989	1999	2009	1969 2009	1999 2009	
Major Areas								
United States	15.11	16.02	17.92	16.15	18.20	3.09	2.05	
Iowa	10.08	11.40	13.96	10.48	13.53	3.45	3.05	
Metropolitan Iowa	8.36	9.60	13.32	9.85	13.35	4.99	3.50	
Micropolitan Iowa	9.28	10.23	13.65	11.89	15.47	6.19	3.58	
Rural Iowa	13.00	14.85	15.17	10.76	12.67	-0.33	1.91	
Metropolitan Areas								
Ames	6.64	7.87	10.18	6.78	8.88	2.24	2.10	
Cedar Rapids	6.45	8.11	10.99	7.62	12.13	5.68	4.51	
Davenport	8.63	7.36	16.49	13.74	16.70	8.07	2.96	
Des Moines-West Des Moines	7.97	10.00	11.49	8.94	11.71	3.74	2.77	
Dubuque	9.21	8.95	12.38	7.81	10.40	1.18	2.59	
Iowa City	7.54	9.54	11.02	8.56	11.71	4.17	3.15	
Council Bluffs	10.26	13.07	14.43	10.60	13.88	3.62	3.29	
Sioux City	10.97	14.06	17.57	13.61	20.95	9.98	7.34	
Waterloo-Cedar Falls	8.79	8.78	17.38	12.06	16.74	7.95	4.68	
Micropolitan Areas								
Boone	8.22	9.58	11.07	8.04	14.89	6.67	6.85	
Burlington	7.18	9.34	17.23	17.35	18.20	11.01	0.85	
Clinton	8.05	8.45	13.65	13.67	14.39	6.35	0.72	
Fort Dodge	10.31	10.52	16.05	12.34	16.77	6.46	4.43	
Keokuk-Fort Madison	9.59	9.69	18.35	12.61	19.04	9.45	6.43	
Marshalltown	7.35	9.23	11.47	14.29	18.43	11.08	4.13	
Mason City	9.30	9.37	10.28	9.21	15.14	5.84	5.93	
Muscatine	7.42	11.37	13.94	11.08	17.77	10.35	6.69	
Newton	8.55	10.83	7.41	7.07	12.03	3.47	4.96	
Oskaloosa	16.91	14.49	14.96	11.70	11.15	-5.76	-0.54	
Ottumwa	11.82	11.54	21.08	18.04	20.31	8.48	2.26	
Pella	12.86	11.53	11.69	8.71	8.47	-4.39	-0.24	
Spencer	8.88	10.67	11.65	11.06	11.34	2.46	0.28	
Spirit Lake	10.05	9.88	11.68	5.90	7.91	-2.14	2.01	
Storm Lake	8.91	9.31	10.29	12.57	15.81	6.90	3.24	

SOURCE: 1970-2000 Census and 2005-09 ACS, U.S. Census Bureau.

		Child Poverty Rates					С	hange
							1969	1999
County	Urban	1969	1979	1989	1999	2009	2009	2009
Adair		13.68	20.98	18.07	9.43	14.36	0.68	4.93
Adams		18.78	17.06	22.98	11.35	7.57	-11.21	-3.78
Allamakee		24.63	18.60	13.39	11.76	14.30	-10.33	2.55
Appanoose		17.59	19.37	28.19	16.04	21.43	3.84	5.39
Audubon		13.75	19.85	16.25	8.21	16.53	2.78	8.32
Benton	Metro	8.04	14.11	14.73	7.24	10.39	2.35	3.15
Black Hawk	Metro	8.87	9.14	19.41	14.36	19.40	10.53	5.05
Boone	Micro	8.22	9.58	11.07	8.04	14.89	6.67	6.85
Bremer	Metro	9.44	8.07	10.62	4.16	6.32	-3.13	2.16
Buchanan		16.97	14.58	22.44	12.91	15.50	-1.47	2.59
Buena Vista	Micro	8.91	9.31	10.29	12.57	15.81	6.90	3.24
Butler		11.06	10.01	12.18	9.84	16.19	5.13	6.35
Calhoun		8.40	12.82	14.61	13.50	16.20	7.80	2.70
Carroll		12.21	13.75	11.09	6.08	11.71	-0.50	5.64
Cass		10.07	13.74	15.66	14.44	23.20	13.12	8.76
Cedar		7.71	10.20	12.77	4.98	11.67	3.96	6.69
Cerro Gordo	Micro	9.49	9.12	10.25	9.15	14.68	5.19	5.54
Cherokee		10.14	12.59	14.19	9.72	5.00	-5.14	-4.71
Chickasaw		14.36	12.25	11.23	9.92	8.44	-5.92	-1.48
Clarke		13.31	24.53	20.60	12.06	9.04	-4.27	-3.02
Clay	Micro	8.88	10.67	11.65	11.06	11.34	2.46	0.28
Clayton		15.11	16.36	16.67	9.56	14.96	-0.15	5.39
Clinton	Micro	8.05	8.45	13.65	13.67	14.39	6.35	0.72
Crawford		11.32	12.03	18.92	12.72	11.40	0.08	-1.32
Dallas	Metro	7.11	7.64	8.00	6.13	7.03	-0.09	0.89
Davis		17.04	33.84	26.86	12.69	4.83	-12.21	-7.86
Decatur		19.48	24.96	25.63	15.63	14.24	-5.24	-1.39
Delaware		20.96	17.46	16.29	8.50	10.99	-9.98	2.48
Des Moines	Micro	7.18	9.34	17.23	17.35	18.20	11.01	0.85
Dickinson	Micro	10.05	9.88	11.68	5.90	7.91	-2.14	2.01
Dubuque	Metro	9.21	8.95	12.38	7.81	10.40	1.18	2.59
Emmet		13.41	16.13	15.16	9.35	11.22	-2.19	1.87
Fayette		11.81	11.57	17.73	12.34	16.41	4.60	4.06
Floyd		10.29	9.15	15.50	12.97	17.25	6.95	4.28
Franklin		14.01	17.11	12.90	9.74	14.38	0.37	4.64
Fremont		15.25	24.37	14.67	11.43	10.45	-4.81	-0.98
Greene		12.28	19.19	17.67	8.92	9.22	-3.05	0.31
Grundy	Metro	6.99	6.88	9.67	4.57	10.25	3.25	5.68

#### Appendix Table 2. Child poverty rates by county in Iowa between 1969-2009.

		Child Poverty Rates			Cha	Change		
							1969	1999
County	Urban	1969	1979	1989	1999	2009	2009	2009
Guthrie	Metro	11.68	17.16	12.14	8.94	8.67	-3.01	-0.27
Hamilton		9.60	11.25	9.14	7.67	12.70	3.10	5.03
Hancock		9.84	8.23	10.62	6.86	10.69	0.86	3.83
Hardin		8.97	14.64	12.60	9.90	17.71	8.73	7.80
Harrison	Metro	13.12	18.12	17.52	8.67	13.88	0.76	5.21
Henry		5.78	9.08	12.36	10.25	18.12	12.34	7.87
Howard		16.70	18.55	14.95	8.69	14.16	-2.54	5.46
Humboldt		11.53	11.97	12.45	13.75	18.67	7.14	4.92
lda		8.66	17.09	11.85	9.06	7.22	-1.43	-1.84
lowa		12.93	9.68	8.90	4.47	11.05	-1.88	6.59
Jackson		16.58	16.40	16.15	13.86	15.75	-0.83	1.89
Jasper	Micro	8.55	10.83	7.41	7.07	12.03	3.47	4.96
Jefferson		8.48	13.32	15.32	12.40	21.00	12.53	8.60
Johnson	Metro	7.66	7.07	10.49	8.13	10.03	2.37	1.90
Jones	Metro	9.86	12.59	13.42	8.78	13.90	4.04	5.12
Keokuk		15.52	14.29	16.96	12.93	9.64	-5.88	-3.30
Kossuth		13.26	14.93	12.47	12.42	9.91	-3.34	-2.51
Lee	Micro	9.59	9.69	18.35	12.61	19.04	9.45	6.43
Linn	Metro	5.82	6.67	10.17	7.56	12.21	6.40	4.65
Louisa	Micro	7.42	14.95	12.92	12.36	17.34	9.92	4.98
Lucas		17.48	22.70	16.55	19.14	11.31	-6.17	-7.83
Lyon		13.13	13.85	16.99	7.89	5.42	-7.71	-2.46
Madison	Metro	12.99	12.14	16.64	6.57	9.06	-3.93	2.49
Mahaska	Micro	16.91	14.49	14.96	11.70	11.15	-5.76	-0.54
Marion	Micro	12.86	11.53	11.69	8.71	8.47	-4.39	-0.24
Marshall	Micro	7.35	9.23	11.47	14.29	18.43	11.08	4.13
Mills	Metro	6.01	10.92	11.27	10.27	6.07	0.06	-4.19
Mitchell		15.89	13.33	13.22	16.51	9.68	-6.22	-6.84
Monona		12.52	19.81	21.36	8.89	17.62	5.10	8.73
Monroe		16.77	19.35	21.36	12.22	14.33	-2.44	2.11
Montgomery		9.71	11.21	12.03	12.33	18.86	9.15	6.53
Muscatine	Micro	7.42	10.29	14.22	10.69	17.90	10.47	7.20
O'Brien		8.80	8.81	14.64	7.74	8.75	-0.05	1.01
Osceola		15.40	12.51	14.05	7.87	11.22	-4.19	3.34
Page		12.92	9.85	18.54	17.87	12.47	-0.44	-5.39
Palo Alto		17.47	13.96	20.15	12.24	8.89	-8.58	-3.35
Plymouth		12.67	14.58	9.64	6.67	5.39	-7.28	-1.28
Pocahontas		10.72	14.92	14.05	12.35	8.35	-2.37	-4.00

#### Appendix Table 2. Child poverty rates by county in Iowa between 1969-2009 (continued).

		Child	Cha	Change				
County	Urban	1969	1979	1989	1999	2009	1969 2009	1999 2009
Polk	Metro	7.90	10.28	12.19	9.67	12.96	5.05	3.29
Pottawattamie	Metro	10.24	12.46	14.39	11.01	15.27	5.03	4.27
Poweshiek		12.41	16.13	12.40	12.01	10.57	-1.84	-1.44
Ringgold		20.23	35.50	22.45	20.40	19.35	-0.88	-1.05
Sac		8.01	13.50	15.30	14.00	15.09	7.08	1.09
Scott	Metro	8.63	7.36	16.49	13.74	16.70	8.07	2.96
Shelby		10.75	18.92	11.14	6.03	8.82	-1.92	2.80
Sioux		13.83	12.49	8.75	7.94	4.47	-9.36	-3.47
Story	Metro	6.64	7.87	10.18	6.78	8.88	2.24	2.10
Tama		10.46	11.27	11.40	14.49	12.83	2.37	-1.66
Taylor		18.95	23.65	23.17	13.10	12.82	-6.13	-0.28
Union		13.17	15.87	21.70	13.78	23.05	9.88	9.27
Van Buren		19.34	23.50	24.23	14.04	23.44	4.11	9.41
Wapello	Micro	11.82	11.54	21.08	18.04	20.31	8.48	2.26
Warren	Metro	6.18	7.12	6.86	6.36	7.97	1.79	1.61
Washington	Metro	7.16	17.97	12.99	10.32	19.30	12.14	8.98
Wayne		17.84	21.24	26.33	17.19	15.77	-2.06	-1.42
Webster	Micro	10.31	10.52	16.05	12.34	16.77	6.46	4.43
Winnebago		5.98	7.03	13.79	11.87	10.87	4.89	-1.00
Winneshiek		12.70	16.98	14.61	6.51	7.50	-5.19	0.99
Woodbury	Metro	10.97	14.06	17.57	13.61	20.95	9.98	7.34
Worth	Micro	8.25	10.52	10.43	9.60	17.71	9.46	8.10
Wright		10.50	12.31	12.30	7.71	15.27	4.77	7.56

Appendix Table 2	Child poverty	v rates by	v county	in Iowa	hetween	1969-2009	(continued)
Appendix lable 2.	ciniu povert	y lates b	y county	iii iowa	Derween	1303-2003	(continueu)

SOURCE: 1970-2000 Census and 2005-09 ACS, U.S. Census Bureau.

### **For More Information**

David J. Peters, Ph.D. Department of Sociology 304 East Hall Iowa State University Ames, IA 50011-1070

TEL: 515-294-1122 FAX: 515-294-2303 dpeters@iastate.edu

Prepared by David J. Peters, Ph.D., assistant professor and extension sociologist. Renea Miller provided valuable layout assistance to this report.

# IOWA STATE UNIVERSITY University Extension

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Many materials can be made available in alternative formats for ADA clients. To file a complaint of discrimination, write USDA, Office of Civil Rights, Room 326-W, Whitten Building, 14<sup>th</sup> and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964.

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Gerald A. Miller, interim director, Cooperative Extension Service, Iowa State University of Science and Technology, Ames, Iowa.