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ABSTRACT—This article addresses a current gap in the inequality literature by identifying demographic and economic factors that best explain persistent income inequality across $N = 817$ nonmetropolitan block groups in Nebraska between 1979 and 2009. Over one-half of rural places in Nebraska have average levels of income inequality, one-quarter have persistently low inequality, and one-fifth of places have persistently high levels of income inequality. Results of multinomial logistic regression suggest that persistently high-inequality places in rural Nebraska tend to be smaller, more urbanized, more ethnically diverse, more wealthy, more specialized in high-skill and low-skill industries, and have experienced fast growth in urbanization, incomes, and professional services. By contrast, low-inequality places tend to be larger, less urban, less diverse, less well educated, less wealthy, less engaged in the labor force, and have experienced population declines and slower growth in urbanization, educational attainment, and incomes.

Key Words: income inequality, regional economics, rural development, subcounty geographies, economic restructuring

INTRODUCTION

Until the 1980s, the United States experienced a period of rising incomes and relatively equal income distributions that began shortly after the Second World War (McGranahan 1980). Over the past three decades, however, incomes have begun to level off and income distributions have become more unequal (Gottschalk and Smeeding 1997). Even during the economic boom on the late 1990s, when Americans became more prosperous as a whole, income inequality remained high and actually increased (Hammond and Thompson 2006). As a result of these trends, social scientists began to document the causes of rising income inequality. The bulk of this analysis has been focused on the national and state levels, and most of the conclusions from these studies hold true across most states (Lynch 2003; Partridge and Rickman 2006). What this body of research has not addressed, however, is the place-based aspects of rising income inequality. That is, most of the existing literature has focused on trends on the national and state levels, and has largely ignored trends at smaller-scale geographies, such as counties or places.

There is a need to better understand the dynamics of income inequality across time and space in order to see how economic inequality is concentrated. Previous research has clearly demonstrated that inequality and poverty persists in the United States across regions over time (Morrill 2000; Lobao and Saenz 2002; McLaughlin 2002; Lobao 2004; Weber et al. 2005; Partridge and Rickman 2006). This body of work has demonstrated that inequality and poverty can be explained by differences in economic structures, individuals, natural resources, geography, and history. However, there have been almost no empirical studies specifically looking at the spatial distribution of income inequality across smaller geographic places (Levy and Murnane 1992; Weber et al. 2005; Lobao and Hooks 2007).

Recent advances in geographic information systems now allow researchers to address these questions more fully. The purpose of this analysis is to examine, using data from 1979 and 2009, which demographic and economic correlates of inequality best explain persistent income inequality across places in nonmetropolitan Nebraska. The analysis is unique in terms of space, using subcounty census block groups to approximate places. It is unique in terms of time, using geographically corrected subcounty data from 1979 and 2009. It is unique in terms of approach, demonstrating that changes in economic structure from an industrial to postindustrial economy

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result in different levels of inequality. This article offers a purely empirical look at persistent income inequality in a single state in the Great Plains. Thus, the results are suggestive rather than definitive, and are seen as a first step at a larger-scale analysis across all states. Nonetheless, this analysis contributes to filling an existing gap in the inequality literature by explaining the causes of persistent income inequality across places.

LITERATURE REVIEW

A number of studies have demonstrated that place matters in understanding inequality, and a comprehensive review of this work is presented by Weber et al. (2005). The majority of these studies take a labor market approach to understanding inequality and poverty, which incorporates both individual and structural approaches within a spatial context (Cotter 2002; McLaughlin 2002; Lobao et al. 2007). These studies generally attempt to understand county-level inequality in terms of different demographic characteristics, family structure components, geographic locations, industrial compositions, and a host of other labor market factors (Lobao et al. 1999; Levernier et al. 2000; Crandall and Weber 2004; Partridge and Rickman 2006). A review of this work is presented below.

In terms of geography, most studies of inequality use states as the unit of analysis. However, a number of studies have examined income inequality at the county level (e.g., McLaughlin 2002; Hammond and Thompson 2006). In many ways, counties are ideal units of analysis to study inequality because their boundaries are relatively stable over time, there is a wide array of data available at that scale, and they are an appropriate "meso" unit between neighborhoods and states. However, recent work has emphasized the need for more subcounty analyses to see if the relationships between inequality and various socioeconomic factors hold across geographic scales (Irwin 2007; Lobao and Hooks 2007). The only study to examine subcounty inequality to date is by Wheeler and La Jeunesse (2008), who looked at inequality by block group in metropolitan areas.

In addition, a majority of the inequality studies reviewed here include some type of control for metropolitan residence. The findings indicate that small metropolitan and suburban counties have lower inequality compared to nonmetropolitan counties. Several studies have also explicitly incorporated spatial statistics into their analyses (Crandall and Weber 2004; Partridge and Rickman 2005, 2006). This work finds that high inequality counties are spatially clustered, and high adjacent inequality exerts a strong positive effect on local inequality.

In terms of demographic structure, the literature unanimously supports the finding that higher levels of educational attainment reduce inequality, especially high school and associate's degrees. A strong relationship is also found between greater numbers of single-headed families with children and high area inequality, especially among those headed by females. The impact that minority populations have on inequality is less clear in the literature. Most studies show that larger populations of non-African-American minorities tend to increase local inequality. However, the findings for African-American populations are mixed. Nation-scale studies show that African-American populations are associated with lower rates of inequality (Levernier et al. 2000; Partridge and Rickman 2005, 2006) while nonmetropolitan studies find increases in inequality (Lobao et al. 1999; McLaughlin 2002). Most of the analyses also look at the effect of age structure, and generally find that younger persons, under age 24, tend to increase local inequality, while older persons, over age 64, tend to reduce inequality.

In terms of economic conditions, one of the strongest findings is that current inequality is highly dependent on previous inequality, indicating that inequality is path dependent. The majority of studies reviewed here shows that increases in labor force participation rates lead to lower inequality rates at the county level, especially for women. As one would expect, the literature also shows that higher unemployment rates lead to higher local inequality, and this effect is particularly strong for male unemployment. Several analyses include employment growth and industrial restructuring in their models explaining inequality (Levernier et al. 2000; Crandall and Weber 2004; Swaminathan and Findes 2004; Partridge and Rickman 2005). The findings demonstrate that employment growth strongly reduces local inequality, especially when counties are near metropolitan areas. Counties experiencing industrial structuring are more likely to have higher inequality, as are counties with a less-diversified industrial base (McLaughlin 2002).

A number of studies include industry employment variables to model local economic structure. One consistent finding across all studies is that employment in agriculture and natural resources tends to increase local inequality (McLaughlin 2002). Most also find that greater shares of employment in consumer services, trade, and government lead to higher local inequality (McLaughlin 2002). Higher employment in the services sector, broadly defined, has a moderate effect at increasing inequality

rates. However, the direction of this effect changes when looking at specific services industries. Partridge and Rickman (2006) found that higher-skill producer services have a strong impact at reducing poverty and inequality, while relatively lower-skill consumer services tend to increase poverty and inequality rates (Partridge and Rickman 2005, 2006). For manufacturing and transportation, two traditional rural industries, the results are also mixed. National studies show that employment in manufacturing and transportation results in lower inequality rates overall, while employment in these two sectors tends to increase inequality rates in nonmetropolitan areas.

Conceptually, the link between industrial restructuring and inequality is rooted in Bell's (1973) argument that modern capitalist societies are undergoing a shift away from a primarily goods-producing industrial economy toward a more services-producing postindustrial economy. The social polarization thesis, based in part on Bell's work, argues that change in economic structure from industrial to postindustrial has increased inequality (Sassen 1991; Hamnett 2003). According to this view, the shift toward a postindustrial economy has increased the number of higher-skill and higher-wage jobs in the financial, business, and professional services sectors. At the same time, however, this has been paralleled by growth in relatively lower-skilled and lower-wage services jobs that support postindustrial industries and serve members of this growing professional and managerial class. Observers have argued that these trends, along with declines in industrial goods-producing sectors, have reduced middle-skilled and middle-wage jobs and have resulted in growing polarization of incomes.

METHODS

In order to better understand persistent income inequality over time, this analysis uses a unique set of spatial data from the 1980 Decennial Census and the 2005–2009 American Communities Survey (ACS). Although ACS data represent average values for each year between 2005 and 2009, rather than point-in-time estimates, they are the only source of income data at the subcounty level. The units of analysis are nonmetropolitan census block groups, which are the smallest geographic unit for which the U.S. Census publishes data. Block-group geographies are "normalized" to the 2000 Census geographies to permit comparisons over time. Removed from the analysis are $N = 773$ block groups in Nebraska's core metropolitan areas of Omaha (Douglas and Sarpy Counties) and Lincoln (Lancaster County), and also $N = 1$ block group with missing data in 1980. This results in $N = 817$ rural block groups in Nebraska for analysis (see Appendix).

Income inequality is measured using Gini coefficients that are calculated across 14 income categories in each block group using census data. To correct for inflation and to equalize the number of categories for analysis, the income categories for 1979 and 2009 are combined to approximate current income levels based on the consumer price index. Using the aggregated household income in each category to calculate income inequality, rather than the number of households, avoids minimizing the effect of income earned at the top of the distribution. To estimate aggregated income, the midpoint of each income category is calculated and multiplied by the number of households.

Gini coefficients (G) measure the degree of concentration or inequality along a distribution of 14 income categories, with scores ranging from zero to one. Scores of zero indicate no concentration of income or perfect equality, and scores of one indicate total concentration of income, or perfect inequality. The formula for G is presented in equation 1, where σX is the cumulative distribution of equality values under a Lorenz curve, σY is the cumulative distribution of households by income categories, i is the current income category, and N is the number of income categories:

$$G = \left| 1 - \sum_{i=0}^{N} \left(\sigma Y_i + \sigma Y_{i-1} \right) \left(\sigma X_i - \sigma X_{i-1} \right) \right| \qquad (1)$$

Since Gini coefficients do not have a meaningful scale, they are normed, or standardized, to the Nebraska mean to facilitate interpretation and are denoted sG. Standard scores of zero indicate inequality at the Nebraska average, while positive scores indicate above-average inequality (i.e., number of standard deviations above the mean) and negative scores indicate below-average inequality (i.e., standard deviations below the mean). sG scores are used to create the persistent income inequality typology.

Discrete choice models, in this case multinomial logistic regression, are used to determine which demographic and economic correlates of inequality best explain a place's membership in the persistent inequality typology. The procedure assesses the importance of the covariates, estimates the odds of group membership, and assesses the accuracy of the classification. The logistic model is presented in equation 2, where $\mathbf{L}$ is a matrix of logits, $\boldsymbol{\alpha}$ is the vector of intercepts, $\mathbf{X}$ is the matrix of demographic and economic predictors, $\mathbf{B}$ is the matrix of logistic regression parameters, and $\boldsymbol{\upsilon}$ is the vector of stochastic residuals. Note that in multinomial logistic

regression, the logits found in **L** are the natural log of the probability of place *i* being in typology category *j* over the probability of the same place being in reference category *r*.

$$\mathbf{L} = \boldsymbol{\alpha} + \mathbf{XB} + \boldsymbol{\upsilon} \quad (2)$$

where **L** is matrix of $L_{ijr} = \ln\left(\frac{P_j}{P_r}\right)$

Standardized *G* coefficients in 2009 and change in *sG* from 1979 to 2009 are used to construct the discrete multinomial dependent variable with three levels. Block groups are placed in the low income inequality group if *sG* values are greater than -0.75 standard deviations below the mean in 2009 and if change in *sG* is also greater than -0.75 standard deviations below the mean. This results in a group with low inequality in 2009 that has been either stable or declining since 1979. Conversely, block groups are placed in the high inequality group if *sG* values are 0.75 standard deviations or more above the mean in 2009 and if change in *sG* is also 0.75 standard deviations or more above the mean. This results in a group with high inequality in 2009 that has been either stable or increasing since 1979. All other block groups not meeting these criteria are classified in the average inequality group.

The predictors in **X** include 30 demographic and economic covariates of income inequality, as identified in the literature. Descriptive statistics are presented in the Appendix. Data are taken from the census and are by place of residence. Demographic predictors include population (in hundreds), percentage of urban population, percentage of minority population (nonwhite or Hispanic), percentage of families that are single-headed, percentage of college-educated population (adults with a bachelor's degree or higher), labor force participation rate, and median household income (in thousands of nominal dollars). Variables for 2009 and percentage change from 1979 are included in the analysis.

Economic predictors for 2009 include percentage of working-age population employed in the following: agriculture, forestry, and mining; construction, utilities, and transportation; manufacturing; wholesale and retail trade; professional, business, and information services; administrative, real estate, and rental services; education, health, and social services; and entertainment, lodging, food, and personal services.

Changes to industry classification systems over time necessitate creation of a unique set of variables measuring change from 1979. These variables include percentage change working in agriculture, forestry, and mining; construction, transportation, communication, and utilities; manufacturing; wholesale and retail trade; finance, insurance, and real estate services; professional services; education, health, and social services; and entertainment, personal, and administrative services.

The assumptions for multinomial logistic regression are generally met, save for a few violations noted as follows. First, the relationship between the logits and the covariates shows a general linear scatter except for population and change in population. Second, dependent errors are likely in the analysis given the spatial nature of the data, which increases the likelihood of Type I error in least squares estimators. However, it is unclear from the literature what effect spatial dependence has on maximum likelihood estimators, such as those used in discrete choice models (Ward and Gleditsch 2008). Since none of these violations is expected to seriously bias the parameter estimates, no attempt is made to address these shortcomings.

RESULTS

Trends in place-based income inequality in rural Nebraska show a duality, with most places experiencing either low and declining inequality on the one hand, or high and increasing inequality on the other. Referring to Figure 1, which presents standardized *G* coefficients (*sG*), we find that 37.2% ($N = 304$) of rural places have low income inequality in 2009, and these rates have declined between 1979 and 2009. By contrast, 37.9% ($N = 310$) of rural places show the opposite trends, with high income inequality that has been increasing since 1979. Few places in Nebraska show emerging inequality (14.3% or 117 places) characterized by low and increasing rates, and fewer still show improving inequality (10.5% or 86 places) characterized by high and decreasing rates.

The first step of the analysis is to create a simple typology of persistent inequality with three levels, based on standardized *G* coefficients for 1979 and 2009. The results of the typology are presented in Table 1. The majority of rural places in Nebraska are characterized as having *average income inequality*, accounting for 54.7% ($N = 447$) of block groups in the state containing 54.8% (467,760) of the rural population. Table 1 shows that average-inequality places have Gini coefficients that are at the state mean in both 1979 ($sG = 0.003$) and 2009 ($sG = -0.009$), and that rates of growth are also average ($sG = -0.011$). However, the typology also identifies some places characterized by very high or very low inequality.

High income inequality places account for 21.9% ($N = 179$) of rural block groups in Nebraska, and 21.8% (186,265) of the state's rural population. These places saw

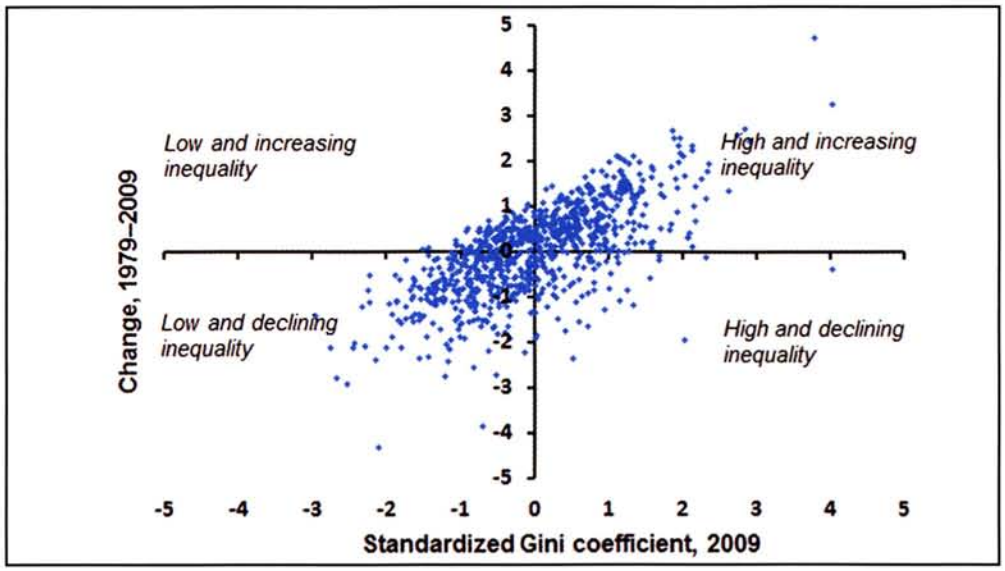

Figure 1 Trend in Gini coefficients for $N = 817$ rural Nebraska block groups, 1979–2009.

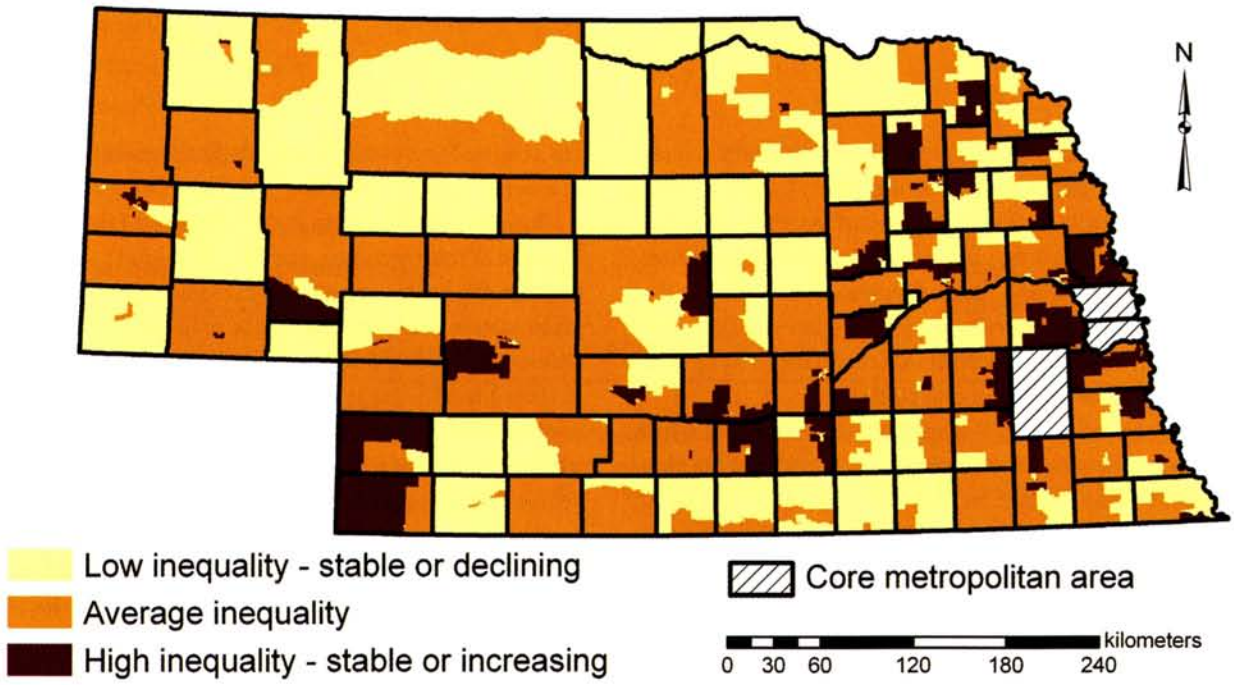

Figure 2. Persistent income inequality typology for $N = 817$ rural Nebraska block groups, 1979–2009.

rapid increases in income inequality between 1979 and 2009, rising from slightly above average ($sG = 0.302$) to very high ($sG = 1.354$) over the past 30 years (see Table 1). As shown in Figure 2, these places tend to cluster in the three general areas of the state. First, high inequality is clustered in the southwest corner of the state, where a number of recreational reservoirs and larger-scale cattle operations are located. Second, inequality is clustered in the central and northeast micropolitan areas of the state, especially in Kearney, Grand Island, and Norfolk. Third, inequality is clustered in suburban areas adjacent to the Omaha and Lincoln metropolitan areas in the eastern part of the state.

Low income inequality places account for 23.4% ($N = 191$) of rural places and populations (199,388). Block groups in this cluster saw income inequality decline from slightly below average in 1979 ($sG = -0.291$) to very low rates by 2009 ($sG = -1.247$). Geographically there is no

TABLE 1
DESCRIPTIVE STATISTICS OF INCOME INEQUALITY TYPOLOGY
FOR $N = 817$ RURAL NEBRASKA BLOCK GROUPS, 1979–2009

	Low inequality ($N = 191$)		**Average inequality ($N = 447$)**		**High inequality ($N = 179$)**	
	Mean	*SD*	*Mean*	*SD*	*Mean*	*SD*
Gini coefficient, 1979						
Nonstandardized	0.261	0.068	0.285	0.080	0.308	0.080
Standardized	-0.291	0.863	0.003	1.016	0.302	1.010
Gini coefficient, 2009						
Nonstandardized	0.425	0.043	0.543	0.043	0.673	0.056
Standardized	-1.247	0.449	-0.009	0.453	1.354	0.585
Gini coefficient change, 1979–2009						
Nonstandardized	0.164	0.077	0.259	0.081	0.365	0.086
Standardized	-0.907	0.728	-0.011	0.767	0.990	0.815

Source: 1980 Census and 2005–2009 ACS, U.S. Census Bureau.

discernable pattern for this group, but most tend to cluster in sparsely populated areas of the state. Low-inequality places are found in the Sandhills of north-central Nebraska, dominated by smaller-scale cattle operations, wheat production, and recreation areas. Another band of low-inequality places runs along the southern tier of the state, which includes recreational reservoirs and agricultural production of wheat and cattle.

The second step of the analysis is to examine which demographic and economic correlates best explain a place's membership in the high and low inequality groups, using the average group as the reference. Results of the multinomial logistic regression using socioeconomic characteristics from 2009 show the model fits the data well (see Table 2). The deviance χ^2 goodness-of-fit test fails to reject the null hypothesis that the model adequately reproduces the observed data ($\chi^2_D = 1104.879$, $p = 0.99$), and the null model χ^2 test rejects the null hypothesis that the model fits as well as the intercept-only model ($\chi^2_N = 532.995$, $p < 0.001$). Pseudo-R^2, which measures the degree of fit between the observed and implied data, also indicates a good fitting model ($pR^2 = 0.554$). The model is adequate at correctly classifying high- and low-inequality places. About one-half of low-inequality places (107 of 191, or 56.0%) and high-inequality places (97 of 179, or 54.2%) are correctly classified, with misclassifications into the average group. Predicted values are assigned to a case if the predicted probability of being in a certain group exceeds $P > 0.7$.

Results of the models are presented in Tables 2 and 3. For ease of interpretation, the odds ratios (ψ) are discussed because the scales are standardized across measurement units, unlike the logits (b), whose scale is not meaningful. Odds ratios are best described as the percentage change in the odds of being in the low (or high) inequality group, compared to being in the average inequality group, given a one-unit change in the predictor variable. Logits are the change in the logistic distribution given a one-unit change in the predictor variable.

A number of demographic and economic variables are significant at explaining membership in the *low-inequality* group, compared to the average-inequality reference group. In terms of demographic structure, places in the low-inequality group tend to have higher populations ($b = 0.116$, $\psi = 12.3$) than those found in average-inequality places. Although larger in population, these areas have smaller urban populations ($b = -0.021$, $\psi = -2.1$), fewer college graduates ($b = -0.063$, $\psi = -6.1$), and fewer minorities ($b = -0.019$, $\psi = -1.9$). Low-inequality places also have much lower median household incomes ($b = -0.118$, $\psi = -11.1$) and lower rates of labor force participation ($b = -0.021$, $\psi = -2.1$) than average-inequality places. In terms of employment structure, no differences are found between low- and average-inequality places in rural Nebraska.

TABLE 2
PREDICTING PERSISTENT INCOME INEQUALITY BY SOCIOECONOMIC FACTORS
FOR $N = 817$ RURAL NEBRASKA BLOCK GROUPS, 2009

	Low income inequality membership			**High income inequality membership**		
Percentage in 2009	*b*	*Odds ratio*		*b*	*Odds ratio*	
Intercept	6.309		*	-14.885		***
Demographic covariates						
Population (in hundreds)	0.116	12.3	***	-0.127	-11.9	***
Urban population	-0.021	-2.1	***	0.014	1.4	***
Minority population	-0.019	-1.9	*	0.020	2.0	*
Single-headed families	0.019	2.0		0.010	1.0	
College-educated population	-0.063	-6.1	***	0.016	1.6	
Labor force participation	-0.021	-2.1	**	0.007	0.7	
Median household income (in thousands)	-0.118	-11.1	***	0.125	13.3	***
Economic covariates						
Agriculture, forestry, mining	0.009	0.9		0.048	4.9	
Manufacturing	-0.025	-2.5		0.049	5.0	
Construction, transportation, utilities	-0.043	-4.2		0.071	7.4	*
Wholesale and retail trade	-0.004	-0.4		0.080	8.4	*
Professional, business, information services	0.003	0.3		0.095	10.0	**
Administrative, real estate, rental services	-0.019	-1.9		0.069	7.1	
Education, health, social services	0.014	1.4		0.087	9.1	*
Entertainment, lodging, food, personal services	-0.002	-0.2		0.080	8.3	*

Source: 2005–2009 ACS, U.S. Census Bureau.
Notes: Null $\chi^2 = 532.995$***; deviance $\chi^2 = 1104.879$; Nagelkerke's pseudo-$R^2 = 0.554$. Multinomial logistic regression used. Average income equality is the reference category. Logits (*b*) represent change in the logistic distribution given a one-unit change in the predictor. Odds ratios (ψ) represent change in the odds of being in the low (or high) group given a one-unit change in the predictor. Income not inflation adjusted. Significance: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Next, the analysis finds several factors that are significant at explaining why certain places are classified into the *high-inequality* group, compared to the average-inequality group. In terms of demographics, high-inequality places are found to have smaller populations (b = -0.127, ψ = -12.7) than average-inequality places. However, these smaller populations also tend to have more minority populations (b = 0.020, ψ = 2.0) and are more urbanized (b = 0.014, ψ = 1.4). High-inequality places are also much wealthier than average-inequality places (b = 0.125, ψ = 13.3). Reflecting these more urban and higher income places, the employment structure is more specialized in higher-skilled services industries. Compared to average-inequality areas, high-inequality places tend to have more employment in professional and business services (b = 0.095, ψ = 10.0) and in education and health services (b = 0.087, ψ = 9.1). However, these areas also have employment specialization in lower-skill services, such as entertainment, lodging, food, and personal services (b = 0.080, ψ = 8.3). In addition, larger employment shares in construction, transportation, and utilities also distinguished between high- and average-inequality clusters (b = 0.071, ψ = 7.4).

In addition to examining how 2009 base values impact persistent income inequality, a second model is estimated to ascertain what effect socioeconomic change between 1979 and 2009 might have on persistent inequality. The results of the change model show only modest fit

TABLE 3
PREDICTING PERSISTENT INCOME INEQUALITY BY CHANGE IN SOCIOECONOMIC FACTORS FOR $N = 817$ RURAL NEBRASKA BLOCK GROUPS, 1979–2009

	Low income inequality membership			High income inequality membership		
Change from 1979 to 2009	*b*	*Odds ratio*		*b*	*Odds ratio*	
Intercept	0.381			-4.629		***
Demographic covariates						
Population (percentage change)	-0.012	-1.2	**	0.004	0.4	
Urban population	-0.019	-1.9	***	0.019	1.9	***
Minority population	0.002	0.2		0.010	1.0	
Single-headed families	0.026	2.7	**	0.004	0.4	
College-educated population	-0.053	-5.2	***	0.020	2.0	
Labor force participation	-0.006	-0.6		-0.010	-1.0	
Median household income (percentage change)	-0.004	-0.4	**	0.012	1.2	***
Economic covariates						
Agriculture, forestry, mining	-0.003	-0.3		0.037	3.8	
Manufacturing	-0.018	-1.8		0.007	0.7	
Construction, transportation, communication, utilities	-0.003	-0.3		0.021	2.1	
Wholesale and retail trade	-0.004	-0.4		0.045	4.6	
Finance, insurance, real estate services	-0.014	-1.4		0.056	5.7	
Professional services	-0.029	-2.9		0.137	14.6	***
Education, health, social services	0.015	1.5		0.044	4.5	
Entertainment, personal, administrative services	0.000	0.0		0.028	2.8	

Source: 1980 Census and 2005–2009 ACS, U.S. Census Bureau.
Notes: Null $\chi^2 = 297.306$***; deviance $\chi^2 = 1340.569$; Nagelkerke's pseudo-$R^2 = 0.353$. Multinomial logistic regression used. Average income equality is the reference category. Logits (b) represent change in the logistic distribution given a one-unit change in the predictor. Odds ratios (ψ) represent change in the odds of being in the low (or high) group given a one-unit change in the predictor. Income not inflation adjusted. Significance: **$p < 0.01$; ***$p < 0.001$.

(see Table 3). The deviance χ^2 ($\chi^2_D = 1340.569$, $p = 0.99$) and the null model χ^2 ($\chi^2_N = 297.306$, $p < 0.001$) all show good fit. However, the pseudo-R^2 is modest ($pR^2 = 0.353$), and only 27.2% of low-inequality places and 41.9% of high-inequality places are classified correctly.

Compared to average-inequality places, the *low-inequality* group had faster declines in population since 1979 ($b = -0.012$, $\psi = -1.2$), and slower growth in urban populations ($b = -0.019$, $\psi = -1.9$), college-educated populations ($b = -0.053$, $\psi = -5.2$), and median household incomes ($b = -0.004$, $\psi = -0.4$). Low-inequality places also saw faster growth in single-headed families compared to average ($b = 0.026$, $\psi = 2.7$). By contrast, *high-inequality* places had faster than average growth in urban populations ($b = 0.019$, $\psi = 1.9$) and median household incomes ($b = 0.012$, $\psi = 1.2$) since 1979. Further, these places experienced very fast employment growth in professional services over the past three decades ($b = 0.137$, $\psi = 14.6$), where all other groups saw declines (see Table 3).

DISCUSSION AND CONCLUSION

This article offers a long-term yet current look at persistent place-based income inequality in rural Nebraska. Analysis of block-group data between 1979 and 2009 identifies four key findings. The first finding is

that most rural places in Nebraska have average or low levels of income inequality over time, indicating that persistently high inequality is not a widespread problem in the state. Over one-half of rural places have average levels and nearly one-quarter have persistently low levels of inequality. Most low-inequality places are found in more sparsely populated areas clustered in the north-central and southern parts of the state. However, the analysis also finds that nearly one-fifth of rural places in Nebraska have persistently high levels of income inequality. High inequality is clustered in the southwestern recreational and cattle areas of the state, and also in the state's micropolitan areas.

The second key finding is that high-inequality places have smaller yet more urban and ethnically diverse populations that have grown over the past 30 years. By contrast, low-inequality places have larger yet less urban and diverse populations that have experienced population declines since 1979. Previous research has found that higher inequality is associated with less urban and more diverse populations, so this finding for Nebraska only partially supports the literature.

The third key finding is that high-inequality places in rural Nebraska have better socioeconomic outcomes than low-inequality places. Places with high inequality have much higher and faster-growing incomes. Conversely, low-inequality places have lower and slower-growing incomes, lower labor force participation rates, and lower numbers of college graduates. This finding for Nebraska runs counter to what has been found in the literature, which documents poorer socioeconomic outcomes for higher-inequality places.

The fourth key finding is that high-inequality places are generally more specialized in services employment compared to average- and low-inequality places. Employment in both higher-skill and lower-skill services industries (e.g., professional services and leisure services, respectively) is markedly larger in places with more inequality. Further, high-inequality places also saw very fast growth in professional services jobs over the last three decades. This finding strongly supports the social polarization thesis (Sassen 1991), which argues that the postindustrial economy increases inequality as it creates large numbers of professional services jobs while at the same time creating large numbers of low-skill services jobs.

In summary, these findings suggest that successful economic development efforts in rural Nebraska are likely to result in increased income inequality at the local level. Many state and local agencies in Nebraska appropriately direct their rural development efforts at diversifying the employment base away from traditional sectors (such as agriculture and manufacturing) and toward services industries, and they also work to stabilize and grow populations in rural Nebraska. While such development efforts undoubtedly have a positive impact at reducing poverty and increasing general economic well-being, the unintended consequences of these efforts is increased inequality. Thus, economic development efforts should also include strategies that seek to employ the least employable by removing common barriers, such as lack of child care and transportation, and mismatch of skills (Partridge and Rickman 2006).

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APPENDIX

SOCIOECONOMIC DESCRIPTIVE STATISICS FOR $N = 817$ RURAL NEBRASKA BLOCK GROUPS, 1979–2009

Percentage in 2009	**Mean**	**SD**	**Change from 1979 to 2009**	**Mean**	**SD**
Demographic covariates					
Population (in hundreds)	10.45	0.47	Population (percentage change)	-3.91	32.06
Urban population	43.25	47.31	Urban population	42.56	46.96
Minority population	10.09	14.63	Minority population	6.78	12.56
Single-headed families	16.62	12.15	Single-headed families	8.03	11.22
College-educated population	18.68	9.07	College-educated population	7.30	7.95
Labor force participation	79.92	20.85	Labor force participation	4.81	18.68
Median household income (in thousands)	44.73	13.33	Median household income (percentage change in nominal dollars)	203.30	83.16
Economic covariates					
Agriculture, forestry, mining	10.83	12.19	Agriculture, forestry, mining	-10.61	10.22
Manufacturing	12.74	10.09	Manufacturing	-0.55	8.02
Construction, transportation, utilities	13.92	7.73	Construction, transportation, communications, utilities	0.81	8.19
Wholesale and retail trade	15.58	8.19	Wholesale and retail trade	-4.70	8.20
Professional, business, information services	7.82	5.42	Finance, insurance, real estate services	1.16	4.06
Administrative, real estate, rental services	2.94	3.13	Professional services	-0.39	3.35
Education, health, social services	21.37	8.33	Education, health, social services	6.51	7.96
Entertainment, lodging, food, personal services	11.07	6.61	Entertainment, personal, administrative services	7.26	7.10
Gini coefficients					
Gini, 1979	0.284	0.079			
Gini, 2009	0.544	0.095			
Change in Gini, 1979–2000	0.260	0.106			

Source: 1980 Census and 2005–2009 ACS, U.S. Census Bureau.
Note: Income not inflation adjusted.