Impact of Poverty on Community Quality of Life and Social Capital:

Longitudinal Analysis of 99 Small Towns in Iowa between 1994-2014


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Great Inequality U-Turn …

“Great Poverty U-Turn”

Periodization, ROA, MOR …
- *Monopoly Capitalism*
- *Welfare Capitalism*
- *Neo-Liberal Capitalism*

Small towns and rural areas have not been immune from these trends.
Economic Inequality ... “who gets what and why”, but also “where and when”.

*County-Level Secondary Data Literature*
- Extensive literature documenting economic, demographic, and spatial correlates of poverty over time. (Curtis et al. 2013; Partridge & Rickman 2005)
- However, does not address impact on social relationships or perceived QOL. Partially answers “what and why”.

*Community-Level Case Study Literature*
- Smaller literature exploring how poverty has impacted psychological attitudes, social relationships, and QOL in specific communities and populations. (Abramsky 2014; Sherman 2009)
- However, ad hoc studies limit comparisons across space and time. Partially answers “where and when”.

QOL & Social Indicators Research …

**Objective QOL**
- Structural/objective aspects of well-being for meso-level communities, relying on secondary data across space (Sirgy et al. 2006).
- Omnibus criterion of “quality” set by researcher a priori, does not allow “quality” to vary between place and people.

**Subjective QOL**
- Social-psychological aspects of well-being for individuals, relying on primary survey data of perceptions (Diener & Biswa-Diener 2002).
- Quality is place and person specific, no a priori criterion. However, this limits comparisons and policy recommendations.

SIR literature largely ignores rural populations and places; and has limited research on subjective community QOL.
Research Questions …

- How does poverty directly affect subjective QOL (basic services)?
- Does it indirectly affect QOL through community social capital?
- Are the observed effects consistent over the past 3 decades?

Data …

Iowa 99 Community Study (Sigma)
- Primary HH surveys in 1994, 2004, and 2014 to measure community social capital and subjective QOL.
- Community defined by ZIP and telephone exchanges.

Decennial / ACS Census
- Block-groups included if ZIP/telex crosses boundary.
**Sigma Data …**

- Random selection of one town between 500 – 10,000 population (1990) in each of Iowa’s 99 counties.

- Mail survey of \( n = 150 \) residents per community using Dillman’s Tailored Design Method. Addresses obtained using ZIP and telex.

- Response rates:
  - 2014 = 41.5%
  - 2004 = 68.3%
  - 1994 = 72.7%
**Procedures** ...

- Structural equation models used to estimate regression paths.
- All SEMs are identified and meet statistical assumptions.
- Demo, Econ, & Poverty variables lagged.
- No spatial effects in model.

- Measurement models creates QOL and SC latent variables to minimize meas. error (using principal axis factors).
Endogenous Variables …

Ratings of community features on 5-point Likert scale including:
(i) jobs, (ii) medical services, (iii) K-12 schools, (iv) housing, (v) government services.
  • EFA Results: 2014 (h²=.552), 2004 (h²=.529), 1994 (h²=.460). z-score with 0 being average for year i.

Measures weak ties among dissimilar people (race, class, gender) including:
(i) everyone for themselves, (ii) clubs/orgs work for interests of everyone, (iii) comm open to new residents as leaders, (iv) entire comm gets behind projects.
  • EFA Results: 2014 (h²=.778), 2004 (h²=.709), 1994 (h²=.677). z-score with 0 being average for year i.

Measures linkages between community and outside orgs including:
(i) number of orgs outside comm, (ii) involved more in outside than local orgs, (iii) ratio of number of outside vs. local orgs membership.
  • EFA Results: 2014 (h²=.740), 2004 (h²=.911), 1994 (h²=.897). z-score with 0 being average for year i.
Endogenous Variables ...

**Poverty** (1990, 2000, 2008-12)
- Person poverty rate, official threshold.

Exogenous Variables (1990, 2000, 2008-12) …

**Demographic Controls**
- Years living in community (Sigma)
- Population density per sq.mi.
- Minority population %
- No high school education %

**Economic Controls (by place of residence)**
- Labor force participation %
- Agriculture, forestry, mining jobs %
- Goods producing jobs % (construction, manufacturing)
- Professional services jobs % (professional srv, education, health & social asst, FIRE)
- Retail & leisure services jobs % (retail trade, arts/entertainment/rec, accommodation/food, other srvs)
My goodness, little fella... How far did you fall down?

You tell me...

Housing
Health Care
Schooling
Hunger
## Demography and Economy ...

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>1990</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>2,632</td>
<td>2,463</td>
</tr>
<tr>
<td>Density/sq.mi.</td>
<td>108.6</td>
<td>101.8</td>
</tr>
<tr>
<td>Minority (non-white/Hisp)</td>
<td>5.3%</td>
<td>1.0%</td>
</tr>
<tr>
<td>No high school educ</td>
<td>10.7%</td>
<td>23.6%</td>
</tr>
<tr>
<td>Years lived in community</td>
<td>36.3</td>
<td>31.8</td>
</tr>
<tr>
<td>Poverty</td>
<td>11.5%</td>
<td>11.6%</td>
</tr>
<tr>
<td>Labor force participation</td>
<td>49.1%</td>
<td>44.9%</td>
</tr>
<tr>
<td>Agric, Forestry, Mining jobs</td>
<td>6.4%</td>
<td>10.7%</td>
</tr>
<tr>
<td>Goods Producing</td>
<td>25.1%</td>
<td>24.0%</td>
</tr>
<tr>
<td>Services Professional</td>
<td>31.6%</td>
<td>28.6%</td>
</tr>
<tr>
<td>Services Retail &amp; Leisure</td>
<td>23.0%</td>
<td>22.3%</td>
</tr>
<tr>
<td>QOL – Basic Services</td>
<td>65.9</td>
<td>60.9</td>
</tr>
</tbody>
</table>

- **Growing Hispanic popl**: Better educated → Improved QOL – Basic Services
- **Older populations**: Slow growing populations → Low but U-turn poverty → More engaged in work → Improving →
- **Falling farm jobs, but rising income**: Stable mfg, growing construction → Healthcare & education →
- **Improved**: Personal services →

Growing Hispanic population → Better educated → Low but U-turn poverty → Falling farm jobs, but rising income → Stable mfg, growing construction → Healthcare & education → Personal services → Improving →

Slow growing populations →

Growing Hispanic population →

Better educated →

Older populations →

Low but U-turn poverty →

More engaged in work →

Falling farm jobs, but rising income →

Stable mfg, growing construction →

Healthcare & education →

Personal services →

Improving →

QOL – Basic Services
POVERTY VS. QUALITY OF LIFE

Poverty * QOL $r = -0.257^*$
POVERTY VS. SOCIAL CAPITAL

$\text{Pov} \times \text{BridgeSC} \ r = -0.201^*$

$\text{Pov} \times \text{LinkSC} \ r = -0.014$
# Poverty Effects on QOL & Social Capital

## Standardized Parameters

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Bridging Social Capital</th>
<th>Linking Social Capital</th>
<th>QOL Basic Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poverty (lag)</td>
<td>-.602</td>
<td>-.130</td>
<td>-.130</td>
</tr>
<tr>
<td>Total Effect</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Poverty Change</td>
<td>.155</td>
<td>.155</td>
<td>.013</td>
</tr>
<tr>
<td>Total Effect</td>
<td>-.041</td>
<td>.096</td>
<td>-.058</td>
</tr>
<tr>
<td>Bridging Social Capital</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Linking Social Capital</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

\[ pR^2 \] .261 .169 .138 .475 .468 .320 .447 .542 .521

## Model Fit

<table>
<thead>
<tr>
<th></th>
<th>1994</th>
<th>2004</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>( x^2 (p) )</td>
<td>9.385</td>
<td>(0.311)</td>
<td>5.013</td>
</tr>
<tr>
<td>RMSEA (Pr&lt;.05)</td>
<td>0.042</td>
<td>(0.482)</td>
<td>0.000</td>
</tr>
<tr>
<td>(\rho^2 / \Delta^2)</td>
<td>0.970</td>
<td>0.998</td>
<td>1.073</td>
</tr>
</tbody>
</table>
Poverty directly lowered QOL *(subjective ratings of basic services)*.

- Places with higher poverty had lower ratings of basic services across all decades.
- Effect strongest in 1990/94 (Farm/Mfgr Crisis), weakest in 2000/04 (1990s Boom).
- Suggests trends with macroeconomic state conditions.

Poverty weakened social capital, indirectly lowered QOL.

- Poverty weakened social capital, which in turn further lowered ratings of basic services. Loss of social capital amplified negative effect on QOL.
- In 1990/94 poverty only lowered bridging SC, disrupting cohesion but not outside linkages/networks. *Fractionalization not isolation.*
- In 2000/04 poverty had no impact on SC.
- In 2010/14 poverty only lowered linking SC, disrupting linkages to outside organizations but not comm. cohesion. Linking SC important to poor communities to bring in outside resources. *Isolation not fractionalization.*
Growing poverty raised QOL.

- Places with growing poverty from previous decade had higher ratings of basic services in 2004 and 2014.

- Effect seen in places with low but growing poverty. Suggests people view basic services more favorably when poverty rates rise from lower levels.

- Places with high but growing poverty people rate services poorly (small N of towns).

- Total effect of poverty change on QOL is zero because of its impact on base poverty (POVΔ reduces POV which reduces QOL, offset POVΔ increasing QOL).

Social capital directly raised QOL

- In 1990/94 and 2000/04 linking SC had strong effect, bridging SC weaker effect. QOL driven by linkages not cohesion.

- In 2010/14 bridging SC has moderate effect, linking SC weaker effect. QOL driven by cohesion not linkages.
### Poverty Effects on QOL & Social Capital

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<th>Linking Social Capital</th>
<th>QOL Basic Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population Density (lag)</td>
<td>-.042</td>
<td>.106</td>
<td>.095</td>
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<tr>
<td>Total Effect</td>
<td>.036</td>
<td>.109</td>
<td>.095</td>
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<tr>
<td>Minority Population (lag)</td>
<td>-.052</td>
<td>-.157</td>
<td>-.253</td>
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<tr>
<td>Total Effect</td>
<td>-.148</td>
<td>-.174</td>
<td>-.249</td>
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<tr>
<td>No High School Degree (lag)</td>
<td>-.051</td>
<td>-.168</td>
<td>-.030</td>
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<tr>
<td>Total Effect</td>
<td>-.118</td>
<td>-.202</td>
<td>-.061</td>
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<tr>
<td>Labor Force Participation (lag)</td>
<td>-.411</td>
<td>-.124</td>
<td>.031</td>
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<tr>
<td>Total Effect</td>
<td>-.130</td>
<td>-.075</td>
<td>.079</td>
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<tr>
<td>Years Lived in Community</td>
<td>.160</td>
<td>-.019</td>
<td>-.043</td>
</tr>
<tr>
<td>Total Effect</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>
## Poverty Effects on QOL & Social Capital

### Standardized Parameters

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<th>Bridging Social Capital</th>
<th>Linking Social Capital</th>
<th>QOL Basic Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Forestry, Mining (lag)</td>
<td>.329</td>
<td>.410</td>
<td>.131</td>
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<tr>
<td>Total Effect</td>
<td>.026</td>
<td>.383</td>
<td>.116</td>
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<tr>
<td>Goods Producing (lag)</td>
<td>.221</td>
<td>.157</td>
<td>.078</td>
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<tr>
<td>Total Effect</td>
<td>-.001</td>
<td>.143</td>
<td>.075</td>
</tr>
<tr>
<td>Services – Professional (lag)</td>
<td>.243</td>
<td>.241</td>
<td>.016</td>
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<tr>
<td>Total Effect</td>
<td>-.017</td>
<td>.225</td>
<td>-.002</td>
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<tr>
<td>Services – Retail &amp; Leisure (lag)</td>
<td>.114</td>
<td>.154</td>
<td>-.129</td>
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<tr>
<td>Total Effect</td>
<td>-.021</td>
<td>.147</td>
<td>-.138</td>
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</tbody>
</table>

### Diagram

![Diagram showing relationships between Poverty, Social Capital, and QOL](image-url)
More densely populated towns had higher QOL.
• Larger city likely means more expansive and better funded services.

Larger minority populations weakened bridging SC in 2014.
• Growing minority populations in 1990s and 2000s likely weakened SC.

Longer tenure increased linking SC.
• Longer years lived in community means more place attachment and better developed networks.

Bridging SC strengthened by jobs in agric & prof services.
• Agriculture – history, ties to local business, political office, “gentry”.
• Professional Services – educ and health cuts across race/class/gender/tenure.

Linking SC weakened by jobs in goods production.
• Absentee-owned firms that dominate economy. Clientele communities.
• Many in food processing with large Latino workforce. Newcomers, low SES.
CONCLUSIONS
Poverty reduced subjective QOL. Entrenches poverty.

- QOL is rating of basic services (jobs, medical, housing, K12 schools, govt).

- Poor more often rely on local services for basic needs.
- Wealthy can commute to other towns for services.

- Lower quality services makes escaping poverty more difficult for adults and children, especially in terms of jobs, K12, and medical services.

**Reasons for entrenchment ...**

- Fewer local resources to improve services (tax base, people, economy).
- Chose to under-invest in local services (apathy, fatalism, traditionalism).
- Less outside state/federal resources in 2000s, especially funding (neoliberal policy).
Poverty weakened social capital, which further reduced QOL. Loss of linking SC problematic.

- In 1990/94 poverty disrupted community cohesion. *Fractionalization.*
- In 2010/14 poverty disrupted linkages between towns and outside orgs. *Isolation.*

*Reasons why poverty reduces linking SC...*

- Older & declining population means smaller organizational networks.
- Declining rural economy means smaller business/farm networks.
- Consolidation of K12, healthcare, & state offices means less institutional networks.
- Fewer outside state/federal resources means less government networks.

Loss of exo-community outside linkages disadvantages poor places because they most need outside resources (funding, technical assistance, advocacy).
Poverty weakened K12, housing, & govt QOL. No effect in jobs and community services QOL.

What services does poverty impact most?

- Strong & persistent effect on housing.
- Growing effect on K12 over time.
- Moderate & stable effect on govt.
- Disappearing effect on comm services.
- No effect on job quality!

Policy should focus on maintaining quality schools (social mobility) and adequate housing to assist poor communities.

<table>
<thead>
<tr>
<th>Standardized Parameters</th>
<th>1994</th>
<th>2004</th>
<th>2014</th>
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<tbody>
<tr>
<td>QOL on Poverty</td>
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<td>Jobs Quality</td>
<td>-.229</td>
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<tr>
<td>Total Effect</td>
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<td>-.131</td>
<td>-.237</td>
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<tr>
<td>K12 School Quality</td>
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<td>-.311</td>
<td>-.493</td>
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<tr>
<td>Total Effect</td>
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<td>-.283</td>
<td>-.578</td>
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<tr>
<td>Housing Quality</td>
<td>-.496</td>
<td>-.436</td>
<td>-.465</td>
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<td>Total Effect</td>
<td>-.557</td>
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<td>Local Government Quality</td>
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<tr>
<td>Community Services Quality</td>
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<tr>
<td>Total Effect</td>
<td>-.385</td>
<td>-.165</td>
<td>-.021</td>
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</table>
Thank you!

For more information

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dpeters@iastate.edu

www.soc.iastate.edu/smalltowns