

Do New Generation Cooperatives Make A Difference?

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New Generation Cooperatives

- In past years, many new generation cooperatives (NGCs) have been established to achieve local ownership of enterprises, especially value-added agricultural processing facilities, and to increase returns to their farmer/investors.
- Other goals associated with this form of economic development include new income for rural residents, new jobs in rural areas, expanded markets and new and diversified agricultural products.
- By their organizational nature and philosophical basis, it is assumed that coops would result in different outcomes for individuals and communities than would investor-owned firms.
- It is generally assumed or hoped that value-added processing and NGCs would have positive impacts on measures of financial/built capital, human capital and social capital.
- Other than a few case studies, no systematic study has been undertaken to determine whether the observed changes in communities with NGCs were due to their presence or can be attributed to other factors.

Review of Impacts of NGCs

- In their summary of the positive impacts, Nadeau and Wilson (2001) stressed
 - The benefits that derive from local ownership and control including higher producer incomes, better paying jobs, increased sales by local retailers, secondary employment impacts, greater tax base, business expansions, and the establishment of new jobs in the community.
 - The social benefits include a sense of leadership and confidence that carries over to other community activities, increased community pride, and increased satisfaction with their community and their lives.
- They also stressed that the negative impacts can include:
 - Environmental degradation
 - Investment losses, loss of markets for producer members, and negative multiplier effects from failure of the NGCs

Four Types of Community Capital

- Five basic answers to question of whether a community is moving toward a desired future (Flora et al., 1998):
 - *increased use of skills, knowledge & ability of local people;*
 - *strengthened relationships & communication;*
 - *improved community initiative, responsibility, & adaptability;*
 - *sustainable, healthy ecosystems with multiple community benefits;*
 - *appropriately diverse & healthy economies*

Cooperative Community Development

- Community Development: “*what people do to improve the overall quality of community*” Flora et al. (2004: 350)
- Cooperative development as “*a group of people forming an organization to provide themselves with specific economic or social benefits*”. Nadeau and Thompson (1996: 7-7)
- Cooperative Community Development: “*a process in which member-controlled organizations develop and operate to achieve the goals of their members and the broader social and economic goals of the community*”. (Nadeau and Wilson (2001: 65)

Measuring Community Capital

- Classify community-level impacts by measuring changes in:
 - *Human capital* -- recognition, use & increase of the skills, knowledge of local people
 - *Social capital* -- relationships, communications, and community initiative, responsibility & adaptability
 - *Environmental capital* -- ecosystem health & community links to the environment
 - *Financial & constructed capital* -- appropriate diverse & healthy economies indicated by levels of poverty, business efficiency, material assets of local people, & diversity of economic base

Methodology

- In order to examine the impact of new generation cooperatives on community capital, we used a retrospective quasi-experimental design.
 - We paid attention to the
 - differences in the rate of change over time and
 - whether it was positive or negative, and
 - How the percent change in a measure of community capital in the counties with new generation cooperatives compared to the percent changes in the other farming dependent counties.
- We used a difference of means test,
 - Looks at both the absolute difference in the mean value of the rate of change between the counties with new generation coops and the other farming dependent counties.
 - If the difference in the means, using a confidence interval of .10, was found to be significant, then the result arrived at was due to the presence of the new generation cooperatives.

Methodology

- The twenty-eight counties in North Dakota that have been designated as farming dependent, together with Foster County, were included in this analysis.
 - This analysis looked at the impact over time of the counties with NGCs compared to similar counties with no NGCs.
 - The four counties with NGCs include Eddy County (North American Bison Cooperative), Foster County (Dakota Pasta Growers Company), Pembina (American Crystal Sugar Company) and Traill County (American Crystal Sugar Company).
 - The two American Crystal Sugar processing plants have been in operation since the 1970s; the North American Bison Cooperative and Dakota Pasta Growers Company were established during the 1990s

Measures

- *Financial capital*: employment, income, taxable revenue, building permit value, sales tax revenue and poverty.
- *Human capital*: population, population diversity in the schools, K-12 enrollment, taxable valuation per pupil, total general fund revenue, cost per pupil and the number of high school graduates continuing their education after high school.
- *Social capital*: Burglaries, motor vehicle theft, property crime, misdemeanors, felonies, small claims filings, other civil court filings.

Descriptive Analysis: Financial Capital

- Employment

- Counties with newer new generation cooperatives (Eddy and Foster County) experienced the largest percentage increase in average annual employment and the smallest decrease in the labor force
- Eddy and Foster County also had the only increase in the number of persons employed
- The percentage of persons unemployed in Eddy and Foster County decreased at a higher rate than the number unemployed in the comparison counties
- The unemployment rate is highest in Pembina and Traill County, and these counties have the largest percent decrease in the unemployment rate

- Income

- The average annual wage in counties with new generation cooperatives increased at a rate double that of the comparison counties
- Per capita income increased at a higher rate in the comparison counties than in those counties with NGCs

Descriptive Analysis: Financial Capital

- Taxable revenue
 - Decreased in all counties
- Building permit values
 - Increased substantially in all counties
- Sales tax revenue
 - Increased in counties with new generation cooperatives and
 - Decreased in the comparison counties
- Poverty
 - Decreased 17% in Pembina and Traill County
 - Decreased 32% in the other counties
 - The comparison counties have the highest poverty rates
- Food Stamp Participation
 - The number of persons and households participating in the food stamp program decreased substantially in all counties, with the largest percentage decreases in Eddy and Foster County

Descriptive Analysis: Human Capital

- Population

- The comparison counties experienced a larger decrease in population, both in absolute numbers and in percentage of change, than did counties with new generation cooperatives

- Education

- Cost per pupil increased substantially in Pembina and Traill County and in the comparison counties
- Student-teacher ratios are lowest in the comparison counties and increased at a higher rate in Eddy and Foster County
- Dropout rates decreased in the comparison counties and increased in counties with new generation cooperatives

Descriptive Analysis: Social Capital

- Burglaries
 - Increased by a third in Eddy and Foster County,
 - Decreased slightly in Pembina and Traill County
 - Decreased by almost 40% in the comparison counties
- Motor vehicle thefts
 - Increased 222% in Pembina and Traill County,
 - Changing slightly in the comparison counties
 - Dropping to zero in Eddy and Foster County
- Total property crime
 - Fell by 48% in Eddy and Foster County,
 - Decreased by 31% in the comparison counties and
 - Increased by 13% in Pembina and Traill County
- Misdemeanors
 - Eddy and Foster County experienced a 94% increase in misdemeanors,
 - The other counties experienced increases ranging from 2% to 5%

Descriptive Analysis: Social Capital

- Felonies
 - Increased substantially in Eddy and Foster County, rising by 133%
 - Increased by 117% in the comparison counties
 - Increased by only 26% in Pembina and Traill County
- Small Claims Filings
 - Decreased only in the comparison counties,
 - Increased 26% in Eddy and Foster County
 - Increased 67% in Pembina and Traill County
- Other Civil Court Filings
 - Increased by 300% in Eddy and Foster County,
 - Increased by 70% in Pembina and Traill County
 - Increased by 100% in the comparison counties

Comparison of Means: Financial Capital

- Foster/Eddy vs. Ag. Dep. Cos.:
 - Percent change in adjusted value of building permits.
 - Foster and Eddy counties had an average increase of 595%
 - The other farming dependent counties had only a 80.83% increase.
- Traill/Pembina vs. Ag. Dep. Cos.
 - Percent change in number of firms
 - Traill and Pembina Cos. (locations of two major sugar processing facilities for American Crystal Sugar, an early new generation coop), experienced only a .10% decrease in the number of firms, whereas
 - The other farming dependent counties experienced a 11.4% decrease.
 - Percent change in poverty
 - Traill & Pembina Cos. experienced a 14.9% decrease in poverty
 - The other farming dependent counties experienced a 30.4% decrease. This may be explained by the fact that these two counties had a lower poverty rate in 1990 (10.75%) than did the other counties (19.70%).

Comparison of Means: Financial Capital

- Foster/Eddy & Traill/Pembina vs. Ag. Dep. Cos.
 - Percent change in number of firms
 - All counties with new generation cooperative experienced an average decrease of 2.85% in the number of firms
 - The remaining farming dependent counties experienced a 11.04% decrease.
 - Percent change in adjusted value of building permits
 - The percent increase in adjusted value of building permits was 438% compared to 72% in the remaining farming dependent counties.
 - No doubt the tremendous increase in property values in Eddy and Foster counties accounted for most of this increase.

Comparisons of Means: Human Capital

- Foster/Eddy vs. Ag. Dep. Cos.:
 - Percent change in number of Hispanic & Asian/Pacific students
 - Foster and Eddy counties had an average increase of 700% in Hispanic students and of 550% in Asian/Pacific students compared to 161% and 108% respectively in the remaining farming dependent counties.
 - Percent change in adjusted cost per pupil
 - The farming dependent counties had higher per capita costs per pupil than did Foster/Eddy counties. This may be explained by the fact that farming dependent counties had greater loss of students (16.33%) than did Foster/Eddy (13.73%).
 - Percent change in school enrollment
 - Foster/Eddy counties had a smaller decrease in school enrollment may be explained by the increased enrollment of Hispanic (700%) and Asian/Pacific (550) students in the school districts in these counties.
- Traill/Pembina vs. Ag. Dep. Cos.:
 - None of the means of the human capital measures for Traill/Pembina counties were significantly different

Comparison of Means: Human Capital

- Foster/Eddy & Traill/Pembina vs. Ag. Dep. Cos.
 - Percent change in changes in population and in adjusted taxable valuation per pupil
 - Counties with new generation cooperative facilities experienced a smaller decrease in population (5.13%) than did the remaining farming dependent counties (12.51%).
 - Counties with new generation cooperative facilities also experienced a smaller increase in adjusted taxable valuation per pupil (26%) than did the other farming dependent counties (50%).
 - Pembina/Traill counties had initially higher taxable valuation per pupil, followed by the farming dependent counties and then by Foster/Eddy counties.
 - Farming dependent counties with fewer students and greater decreases in enrollment experienced an increase in taxable valuation per student than did counties with more students and smaller decreases in enrollment.

Comparison of Means: Social Capital

- For none of the three comparisons were the percentage changes in measures of social capital for counties with new generation cooperative facilities significantly different from counties without new generation cooperative facilities.

Summary & Conclusions

- The descriptive analysis indicated that
 - Counties with new generation cooperatives did experience positive impacts for financial and human capital,
 - They experienced a mixed set of both positive and negative impacts for social capital.
- The difference of means tests indicated that
 - The presence of prior or contemporary new generation cooperatives had limited effects on measures of community capital.
 - The contemporary new generation cooperatives did appear to have limited effect on human capital by improving the population diversity and attenuating the rise in adjusted cost per pupil,
 - They had a limited effect on financial capital through adjusted value of building permits as a result of new construction.
 - They had no effect on measures of social capital.

Summary & Conclusions

- The results indicate mixed support for the thesis that value-added, new generation cooperatives would have positive impacts on their communities.
 - Over time within counties with new generation cooperatives, the impacts are readily apparent, but whether those impacts can be attributed solely to the presence of the cooperative was only minimally supported.
 - The difference of means tests indicated that the changes in only 10 percent of the measures of community capital could be attributed to the presence of new generation cooperatives.
 - The results of the quasi-experimental design indicate that the observed impacts in community capitals in the counties with new generation cooperatives cannot be attributed to the presence of new generation cooperatives alone.
 - The results also indicate that the assumed benefits that are extracted from anecdotal data and case studies may be attributed to other factors than to the presence of new generation cooperatives

Limitations

- First, the impacts of new generation cooperatives are experienced at several levels: The individual, community and the region.
 - Using the county as the unit of analysis may confound the interpretation of results.
 - It is at the community level where the greatest impacts in some community measures of financial and human capital may be experienced.
 - The trade region or commuting zone may be the better unit of analysis to determine the impact of individual measures of financial and human capital.
 - In addition, the measures of social capital may be experienced more at the community level than at the county or regional level.

Limitations

- Secondly, using a quasi-experimental design that compares changes over time of the study group (*counties with new generation cooperatives*) with a control group (*all other farming dependent counties*) only indirectly measures the changes within the county.
 - Ideally, a longitudinal design that utilizes before and after measures of community capital measured at the community level would better capture these changes.
 - Although our measures begin in 1990 before the establishment of the contemporary new generation cooperatives, the impacts are measured at the county rather than the community level.
 - Counties with new generation cooperatives may have had higher initial levels of community capital than counties without new generation cooperatives