

Rural Smart Shrinkage and Perceptions of Quality of Life in the American Midwest

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American small towns and rural communities have been in economic and social upheaval since the 1980s. Most communities in the Midwest experienced this through shrinking populations, an exodus of younger people, job losses, and aging infrastructure (Kusmin 2016). One reason for these changes was the twentieth-century shift away from an industrial society towards a postindustrial one, which hit traditional rural sectors like agriculture and manufacturing particularly hard (Harvey 2005, Peters 2012). In agriculture, increased mechanization, scientific innovation, and the shift from family farms to factory-scale operations reduced labor needs and affected services and businesses that relied on the labor force and their families to prosper (Johnson and Scott 2015). Many manufacturers moved out of the Midwest in search of lower labor and operational costs, heading first to the South and West in the United States and later to developing countries. (Kaya 2010; Kochhar et al. 2005) As in many industrialized countries, low fertility rates in the United States contributed to population shrinkage and coincided with increasing rates of out-migration from rural counties, together accelerating the overall rural population loss. (Martin et al. 2019; Martinez-Fernandez et al. 2016).

Due to these multiple trends, those who remain in small and rural Midwestern towns are typically older, less racially and ethnically diverse, and less likely to have a college degree than residents of growing metropolitan areas, including suburbs and cities in the same states. (Parker et al. 2018) As populations shrink, communities face school consolidations, reductions in local services, shuttered retail districts, and increasing infrastructure costs on a per household basis. Data shows that these trends have continued consistently over several decades and are unlikely to be reversed (Johnson and Lichter, 2016; Peters, 2013). Individual communities also have little

agency to intervene in these changes on their own, because they derive from social, economic, and geopolitical processes beyond their control.

Scale is another critical component in understanding this transition. Nineteenth-century agricultural exchange required numerous small service centers distributed across the land grid to facilitate the storage and sale of agricultural goods and supplies. As a result, towns in the region appeared at intervals determined by the late eighteenth-century principles of the Jeffersonian grid and territorial land surveys (Ghandour 2013). This settlement pattern created many small and rural places, all now competing with each other to hold on to their shrinking populations and find ways to attract new residents. For example, 53 percent of all cities and towns in the Midwest have populations under 500 people, totaling some 5,100 communities (U.S. Census 2018). Sociologist Robert Wuthnow wrote that "a visitor traveling through the region in 1980 would have come to a town every ten miles if they had been located equidistant from one another – every eight miles in Iowa, where towns were most abundant, and every fourteen miles in the Dakotas, where towns were less common. On average, there were seven towns in every county. Twenty-five years later, the visitor may have noticed that nearly all the towns still existed. But two of every three would have been smaller" (Wuthnow 2011, 127). For the smallest and most rural of these towns, the shrinkage was most pronounced, and as the percentage of the U.S. population living in urban and suburban communities continues to increase, it is unlikely that more than a few of these 10,000 communities will grow (Cromartie 2018). Despite this, current thinking about rural population loss focuses primarily on promoting high-cost investments in economic development and other uncertain growth strategies that attempt to increase economic activity and bring people back to these small towns (Peters 2019a).

This chapter presents findings from a multiyear research project about quality of life (QoL) in shrinking rural towns in the State of Iowa.¹ The project began with an overarching research question—how were some small and shrinking rural communities in Iowa able to maintain QoL as they lost population, jobs, and occupied housing units since 1990? An explicit goal of the project was to initiate a different conversation about rural communities by changing the dominant analytical paradigm from growth to one that encouraged adaptation to population loss as a form of community resiliency. To integrate multiple methodological perspectives, the project was led by an interdisciplinary team from the fields of Architecture, Community and Regional Planning, Data Science, and Rural Sociology.² The research team did not approach population loss as a problem that needed to be solved, instead shrinkage was accepted as a given context. From this starting point, the work sought to develop new knowledge about how some communities had been better able to adapt to population loss than others. Using qualitative and quantitative data, derived from unique longitudinal polling, one-on-one interviews, and public data sources, the team investigated changing perceptions of QoL in a group of seven rural Iowa towns over the last twenty-five years. One of the project’s contributions to QoL research was to situate this study in small and shrinking rural communities in the Midwest, which have rarely been the focus of academic research.

During two years of site visits, interviews, and multi-disciplinary data analysis, the team observed that the negative trends in QoL perceptions that often accompany population loss were best mitigated by investments in social capital, rather than in economic development planning undertaken with a growth mindset. In shrinking towns where residents had reported improving measures of QoL in longitudinal polling, the team found evidence of local activities over several decades to raise funds and contribute personal time to protect community services and build strong

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social networks. Data indicated that these communities were not wealthier, more educated, or demographically different than shrinking communities of similar sizes that experienced declining perceptions of QoL over the same period. The team therefore concluded that other factors were at work. Evidence indicated that purposeful collective action toward shared goals significantly contributed to positive QoL trends (Peters et al. 2018; Peters and Zarecor 2017).

This process of adaptation, described in the project as *rural smart shrinkage*, operates within the social fabric of a community and intensifies over time. Motivated local individuals need to be present to lead these efforts and also to mentor others to assume positions of leadership in the future, otherwise the process cannot be sustained.³ Approaches observed in the communities that contributed to improved QoL perceptions included new services for seniors and children, creating shared community spaces, and encouraging new voices in leadership. As a framework for moving forward, rural smart shrinkage shifts away from the negative associations of population loss with community decline and turns instead to intentional and low-cost strategies that small rural communities can utilize as they look to the future.

The following sections describe the project methodology and findings. The chapter begins with an introduction to the research framework and terminology. A summary of the relevant shrinking cities concepts developed in Europe and the United States is presented to provide a context for research on rural smart shrinkage. This is followed by quantitative analysis of decennial longitudinal polling data that the team used to identify the effects of smart shrinkage processes on QoL perceptions. Some of the qualitative findings from interview data is integrated into the sections

³ Qualitative data collection for this project occurred in 2018, therefore the data cannot provide empirical evidence about how smart shrinkage efforts may or may not be sustainable over time in the case study towns. The challenge of sustaining purposeful collective action can be inferred from the insights and information provided in interviews by local stakeholders who often attributed the success of specific initiatives to the personal contributions of individual leaders. In the next stage of the project, the team plans to develop and test a curriculum to share knowledge about smart shrinkage with rural Iowa towns vulnerable to decline and collect data over time about the effectiveness of such strategies in increasing perceptions of QoL and slowing community decline.

to provide a nuanced picture of everyday life in shrinking rural places.⁴ The interview analysis uses a grounded theory approach to search for perceptions of QoL that are strong indicators of purposeful collective action, as such actions are important to the process of rural smart shrinkage. Finally, a set of principles, developed from the project data, is presented to help researchers differentiate rural smart shrinkage from related urban phenomena.

Smart Shrinkage as a Research Framework

The term “smart shrinkage” was borrowed from earlier studies of post-industrial and post-socialist European cities, many of which experienced significant population loss in the decades after the fall of the Berlin Wall. Across Europe, urban population loss accelerated in the 1980s and 1990s after the collapse of multiple industrial sectors led to economic crisis and out-migration from urban centers (Haase et al. 2016a). Large state subsidies protected uncompetitive industries in the Eastern Bloc until the end of Communist Party rule in 1989, but a period of instability, economic contraction, and structural change followed (Jeffries 2002). These trends were compounded by declining fertility rates as well as unequal growth patterns between regions and increased mobility within the European Union's twenty-eight member countries after 2004 (Castro-Martín and Cortina 2015). Following on the European research, scholars of American cities embraced the smart shrinkage framework to look at post-industrial shrinking cities such as Detroit, Michigan and Youngstown, Ohio (Dewar and Thomas 2012; Hollander 2018; Safford 2009). Smart shrinkage has also been applied in the American context to understand and develop strategies to mitigate the long-term negative effects of real estate boom-and-bust cycles in high growth areas (Hollander 2011).

⁴ The research team conducted interviews with 45 individuals in seven Iowa communities from November 2017 to May 2018: Correctionville (pop. 800), Elma (pop. 528), Hamburg (pop. 1,089), Montezuma (pop. 1,412), Murray (pop. 710), Sac City (pop. 2,074), Sheffield (pop. 1,113). All population estimates from the U.S. Census 2018 Estimates, <https://factfinder.census.gov/>.

The European studies that popularized the smart shrinkage concept focused on the built fabric of shrinking cities and municipal governance practices, which were of particular interest to academics in the former East Germany. A group of researchers from German universities and cultural institutions, funded by the German Federal Cultural Foundation, developed the influential "Shrinking Cities" project, led by Berlin-based curator Philipp Oswalt.⁵ They engaged with more than 200 architects, artists, researchers, and community members from 2002 to 2008 to reimagine the future of shrinking cities. The project surveyed evidence of urban shrinkage on every continent and probed more deeply into four cases studies: Detroit, Michigan (US), Manchester/Liverpool (UK), Halle/Leipzig (Germany), and Ivanovo (Russia). The research and creative products from the project emphasized architectural and design-based responses to the effects of population loss on cities as expressed in art, film, design, and text, culminating in a series of exhibitions and publications, including three large edited volumes of research and project proposals (Oswalt 2005, 2006; Oswalt and Reinerts 2006).

Emphasizing a more rigorous application of social scientific methods to questions of urban governance in the context of population loss, a second project based in Germany began in 2009, in part as a critique of the imprecise scientific methodology of the Shrinking Cities collaboration (Haase et al. 2016a). The "Shrink Smart" project was based in Leipzig from 2009 to 2012 and looked at governance practices in ten post-industrial European cities affected by population loss including eight cities in the former Eastern Bloc (Rink et al. 2009; Haase et al. 2016b).⁶ The project focused on how cities could better manage people, resources, and infrastructures as population loss continued, and also how to protect services and the environment while maintaining QoL for residents who remained (Bernt et al. 2012; Couch et al. 2012). A contribution of this project to the broader research agenda for shrinking cities was to separate the local and the global in seeking to

⁵ The results are archived at this website in German, English, and Russian: <http://www.shrinkingcities.com/>.

⁶ The project can be accessed on the Shrink Smart website, <https://www.ufz.de/shrinksmart/>

better understand the challenges for cities. Writing in 2009, Leipzig project leaders Dieter Rink, Annegret Haase, and Matthias Bernt wrote that:

Urban shrinkage always appears in a specific context or is embedded in a certain manner. With this understanding, urban shrinkage is always an empirical question. Each shrinking city has, on the one hand, its own 'local story' which is due to the specific settings of the historical, political, economic, social etc. conditions. [These conditions] explain the local dimension of the logics of population decline and its impact on urban space, structure and society in a given case... On the other hand, there are broader or global contexts that also shape the fortunes of cities, (more or less) independently from their local settings (Rink et al. 2009, 12).

In formulating their research to consider the interplay of the local and the global, the project emphasized that individual cities were not able to "shape" their "fortunes" at will, instead they experienced global changes in a particularly local way that required community-level responses.

Rural Smart Shrinkage

The interplay between the local and the global became a critical framework for this study of rural smart shrinkage, which is the first in the research literature to consider smart shrinkage in the specific setting of small and rural places in the United States. As the Leipzig-based research showed, the topic required attention to both the specific conditions of rural America in "historical, political, economic, social" terms and also to the external realities of post-Fordist rural economic change and the dynamics of rural places in an increasingly suburban and urban world. Our research team had to start by discerning whether or not the concept of smart shrinkage could be productively applied in this context, and if so, in what ways rural adaptation strategies might be different from those in cities.

In the project methodology, the shrinkage itself was not viewed as a negative indicator on its own. Only when the shrinkage led to worsening QoL perceptions over several decades was a town categorized as in *decline*. The first step was to analyze existing longitudinal polling data about perceptions of QoL in small Iowa towns and ascertain if rural smart shrinkage could be recognized within the data set. For purposes of identification, the research team looked for towns

with higher-than-average increases in QoL perceptions over the same period that the town lost population, jobs, and occupied housing units—all three measures were chosen initially to find a multi-dimensional phenomenon of shrinkage that was more than just demographic change. Those that met these criteria were identified as possible smart-shrinking communities. The opposite case, higher-than-average decreases in QoL perceptions over the same period with similar measures for shrinkage pointed the team to rural communities in decline. Two other combinations had significance in the data analysis: *smart growth* with higher-than-average increases in QoL metrics and also in population, jobs, and occupied housing units; and *adverse growth* with higher-than-average decreases in QoL metrics while the size of the town increased. The Iowa towns undergoing adverse growth had experienced an influx of migrant labor to work in low-wage industries like meatpacking.

To learn more about what was occurring in specific local contexts of shrinking towns, the team chose five identified from the data as experiencing smart shrinkage and two in decline for further study. This group of seven were among 99 small Iowa towns that had been participating in the Iowa Small Town Poll (ISTP)—a unique longitudinal poll of perceptions of QoL conducted by Iowa State University researchers since 1994.⁷ In these towns, the team conducted over fifty hours of semi-structured interviews with community stakeholders, gathered public data, and mapped the spatial characteristics of the communities and their surroundings. This analysis functioned not only to build new knowledge for the project, but also to verify that the ISTP data had correctly identified communities with innovative responses to shrinkage. As might be expected, not all communities on the initial smart shrinkage list engaged in purposive collective action to address the shrinkage.

⁷ Researchers collected data from the 99 towns in the Sigma Study (later the Iowa Small Town Poll) in 1994, 2004, and 2014; another poll is scheduled for 2024.
<https://smalltowns.soc.iastate.edu/iowa-small-town-poll/>.

From the five that were studied, two communities stood out as exceptional in the qualities associated with smart shrinkage.⁸

To best capture the multidimensional and intentional qualities of rural smart shrinkage, the inputs of smartness were distinguished from its outputs (Peters et al. 2018). Flora and Flora's (1993) framework of entrepreneurial social infrastructure (ESI) was utilized to describe actions that led to smart shrinkage (i.e. inputs) and separate them from the effects in the community (i.e. outputs) that could be measured in the QoL data. In the ESI framework as adapted for this project, "smart inputs or activities" were conceptualized as "purposeful collective actions to achieve community goals" that have a measurable effect on QoL perceptions over time (Peters et al. 2018, 40). The separation of inputs and outputs was critical in the methodology to facilitate translating project findings into recommendations to share with interested experts and communities.

The Terminology of Smart Shrinkage and Decline

A review of the urban smart shrinkage literature highlighted two concepts that researchers have used to describe communities that are losing population: *decline* and *shrinkage*. The term decline in the social science literature implied a downward trajectory of several indicators including economic performance, labor force numbers, and demographic changes with negative consequences for the affected city or urban region (Lang, 2005). The Leipzig research team defined urban shrinkage as "an empirical phenomenon resulting from the specific interplay of different macro-processes at the local scale" resulting in population loss (Rink et al. 2009, 19). Planner Daniel Hummel added specificity to the numerically focused definition by defining shrinkage as "endemic population loss" (Hummel, 2015). Smart decline, promoted in the U.S. context by urban affairs scholars Frank J. Popper, Deborah Popper, and Justin Hollander, was a variation on this

⁸ The towns in the study with the best measures of smart shrinkage were Elma, Iowa (pop. 528 in 2018), and Sac City, Iowa (pop. 2,074 in 2018), based on the 2018 U.S Census Estimates.

approach that proposed combatting the negative consequences of population loss with what the Poppers described as “planning for fewer people, fewer buildings, [and] fewer land uses” (Popper and Popper, 2002, 23; Hollander and Németh 2011).

In much of the literature, decline and shrinkage were used interchangeably, since there was widespread agreement that population loss in cities inevitably led to multi-faceted urban decline (Hartt 2018a, 2019). The discussions often focused on how cities, or the case of the work of Popper and Popper on how entire regions, could become smaller and also better, but only after experiencing a major downward trajectory on most QoL measures. For the Shrinking Cities project, the emphasis was on seeing the potentials latent in the overbuilt and no-longer-needed spaces of shrinking cities (Oswald 2005, 2006). The authors called for reimagining shrinking cities through their physical and material assets and learning from the resourcefulness of their inhabitants (Oswald and Reinerts 2006). For the Leipzig project, population loss was a neutral factor and the context in which communities had to operate (Rink et al. 2009). The broad objective was to help communities find balance so that the size, capacity, and costs of infrastructure and services were proportional to the number of residents. The Poppers and much of the American research on shrinking places that they inspired referred to this process of balancing with the term “right-sizing” (Hackworth 2015; Hollander 2018; Hummel 2015; Popper and Popper 2002; Schilling and Logan 2008). Hummel wrote that “the crucial goal of right-sizing for shrinking cities is to arrest population decline. The consequences that result from this decline are evidenced in the negative impacts it has on the municipality and the general well-being of the city” (Hummel 2015, 406).

The literature has recently started to address the methodological problems that arose when shrinkage and decline become interchangeable. Planner Maxwell Hartt has published a series of articles on prosperous shrinking cities in the United States and different typologies of urban shrinkage with diverse paths for future economic growth and population trends. His work emphasizes that data does not support the linkage between shrinkage and decline in a large

number of cities and that changing household size, with more prevalence of smaller families and single adults, leads to population loss and does not necessarily affect prosperity in some cities (Hartt 2018a, 2018b, 2019; Hartt and Hackworth 2018). In a recent article about the specific context of a shrinking post-socialist city, urban researchers affiliated with the Leipzig project from the Czech city of Ostrava summarized the changing scholarly approaches to shrinkage and decline in the last ten years:

Although shrinkage ha[d] affected 40% of medium-sized and large cities in Europe ten years ago and 70% in Central and Eastern Europe, today it seems that some of the previously shrinking cities are gradually succeeding in mitigating or countering this process. Unlike previous research on urban decline or urban decay, this process can be perceived to be somewhat neutral, because, under certain conditions, it can be an alternative path of sustainability in a city's trajectory that can create a favorable environment for the renewal of urban growth. In other words, urban shrinkage represents a complex open-ended process. Rich empirical evidence suggests that there are cases in social reality where the urban shrinkage process shows both positive and negative effects. Finding adequate local policy responses is, however, still rather rare, although the shrinkage presents many specific challenges for sustainability (Slach et al. 2019, 1).

The article details how population loss in particular areas of a city like Ostrava and the effects of "too much infrastructure available for too few residents" could inform municipal policy responses and expenditures (Slach et al. 2019, 1). The conclusion warns that this case study and others by researchers affiliated with the Leipzig research team "show the financial unsustainability of neoliberal pro-growth governance in shrinking cities" and the failure of many municipal governments to curb excess spending on economic development projects that do not bring promised population growth (Slach et al. 2019, 15; Rink et al. 2012; Haase et al. 2016b; Bernt et al. 2014).

For this two-year research project, the team used a hybrid framework influenced by the Leipzig methodology. Shrinkage denoted losses of people, jobs, and housing units, but this was not assumed to correlate directly with decline (defined by worsening QoL metrics as perceived by residents in the context of shrinkage). Population loss was an important variable, however, that contributed to community decline in combination with other objective and subjective measures of community resources, services, and social capital. Population loss was, therefore, not only an

empirical phenomenon in this setting, it was the given local context that characterized the condition of the place.

To sustain quality of life, the thesis that has emerged from this project is that communities should adapt to shrinkage, rather than fight against it. Changing perceptions of QoL going forward would then reflect the success in smart-shrinking towns, or failure in declining towns, of the adaptation strategies and measure the community's resiliency to the shrinkage in the midst of complex changes. Unlike in the urban context, our data shows that rural shrinkage will likely never fit within the sustainability paradigm that has emerged as a compelling logic for why not all shrinkage is negative. The argument, as expressed by Hollander, Hartt, Slach, and others, is that some cities are better off becoming smaller so that economic renewal can result from better utilization of the remaining economic, educational, and geographic resources (Flora 2019; Hollander 2011; Hartt 2018a; Slach et al. 2019). The qualitative and quantitative data collected and analyzed for this project shows that, in the rural context, all shrinking communities experience some negative changes due to population loss and therefore are vulnerable to decline. Even those that proactively pursue purposeful collective actions to address community-level problems do not start growing again, as in some cities. For rural places, the findings show that slowing population losses and improving QoL perceptions are more realistic and meaningful targets. In the longer term, these efforts may or may not lead to population increases, but those residents already in a community are less likely to leave and some may choose to return after a period away if satisfaction with quality of life is increasing.

In the specific setting of rural Iowa, the team observed that the population of small and rural communities changed at a slower pace and for different reasons than in cities. Small places have less human capacity and fewer financial resources to rebound from shrinkage even when the changes happen slowly (Hospers and Syssner 2018). In many places, towns have already right-sized in some dimensions, such as consolidation of school districts and cooperative agreements to

provide senior services, emergency services, utility and facility maintenance, and financial processing (Mohr et al. 2010). Without excess capacity and often too few people to keep shops, restaurants, and local businesses open, it is harder to find ways to implement the Poppers' idea of planning for "fewer people, fewer buildings, [and] fewer land uses." On the other hand, there are significant challenges to more radical change; for example, the Poppers' controversial 1987 proposal to depopulate large areas of the Great Plains and create a new "Buffalo Commons" by returning the region to pre-European settlement land uses without conventional rural towns (Popper and Popper 2006).

Changing regional demographics, increased interest in environmental stewardship, and concerns about the climate crisis make interventionist approaches appealing to some. Yet a plan like the Buffalo Commons, which the Poppers called "a combination of literary metaphor, public-policy proposal, futurist prediction and ecological restoration project," cannot function as a real-time framework for individual communities trying to manage their own shrinkage (Popper and Popper 2006, 2). The scale of action needed to create any regional-scale depopulation or resettlement plan, or even environmental mitigation strategies focused on improving land management, would necessarily require cooperation among many municipal, state, and federal stakeholders.⁹ Therefore, with growth unlikely and population losses continuing, rural residents in individual towns urgently need small-scale, on-the-ground guidance for steps that they can take in their community to intervene in what now appear to be inevitable processes of decline across the American Midwest.

⁹ On the potential of sustainable urban systems approach as a response to shrinkage in communities within the Mississippi River Watershed, see Passe, Ulrike, Janette Thompson, and Kimberly Zarecor, eds. 2020. *SUS-RURI: Proceedings of a workshop on developing a convergence sustainable urban systems agenda for redesigning the urban-rural interface along the Mississippi River watershed held in Ames, Iowa, August 12–13, 2019*. Ames, Iowa: Iowa State University Digital Press. <https://doi.org/10.31274/isudp.35>.

Rural Smart Shrinkage as a Distinct Paradigm

To differentiate rural smart shrinkage from other examples in the broader discussions of shrinking communities, the research team developed seven principles observed during our two-year study that are posited as differentiating shrinkage in a rural setting from the more well-known urban and suburban examples. Delineating these differences is necessary, because the economic, social, and environmental challenges facing these communities are distinct, poorly understood, and pervasive (Hospers and Syssner 2018). Based on our qualitative and quantitative data analysis, the dynamics in rural communities are more complex than non-residents anticipate. Perceptions about QoL are closely tied to local histories, cultural attachment to place and lifestyle, and not driven primarily by economic considerations.

These seven principles are offered to establish the topic of rural smart shrinkage in the United States as a distinct phenomenon worthy of further study.

- *Rural residents face an existential question of whether or not their towns can survive.* As fewer people chose to live in rural places, there are concerns that some towns might become too small to remain viable. As the urban shrinkage literature shows, urban residents think about alternate futures for their cities and what positive qualities could be marketed to potential newcomers or investors. Growth is still a possibility, because cities are full of potentials deriving from existing strengths and legacies of earlier economic prosperity. Rural residents, on the other hand, often emphasize those aspects of their community that were positive in the past and seek to revive some of what has been lost. Becoming more open to new ideas, better integrating newly arrived people into community life, and encouraging people of all ages to take on leadership positions are qualities that smart-shrinking communities share.
- *Rural shrinkage is slow and not always visible in people's day-to-day lives, therefore it is not experienced as a crisis.* Residents of small and shrinking rural places with higher-than-

average QoL trends reported in interviews that they thought their town's population was similar now than in the past. Some children will go to college and do not return, a few families will leave for new job opportunities, but others will come back to care for aging parents or to take advantage of the low cost of living. Family size is smaller than in the past and the population is aging, so schools consolidate in response, but most houses are still occupied and the town itself remains physically the same size. This creates the impression for long-term residents that the overall population size is stable. When shops, restaurants, and businesses close, people are more likely to attribute this to external pressures, such as new big-box stores or chain restaurants in nearby towns or the ease of online shopping, than to population loss. Conversely, in the two declining towns in the study, residents reported in interviews that the shrinkage had clear negative effects on QoL and local amenities. This held true even if the percentage change over the same period was similar between two towns. This contributes to the adaptation hypothesis—that rural residents can adapt to the conditions created by shrinkage for a period of time and in the best cases create a lifestyle and rich social networks that operate within this new normal without focusing on the population loss itself.

- *Fewer people live in rural communities as a percentage of the total population in the United States because of growth in suburban areas, not because of an exodus from rural communities.* Rural communities are much the same now as they were in the recent past, but the world beyond has changed. Demographics show that a majority of younger, better educated, and more diverse people in the United States choose to live in suburbs or in a group of growing cities, rather than rural places (Cromartie 2018). In interviews, rural Iowa residents talked about wanting to stay in communities where they knew their neighbors, they were among people who shared their values, and where they felt safe. If such views extend to making

people who are different or new feel unwelcome, then the futures of rural and suburban/urban communities in terms of vitality and growth will continue to diverge.

- *Powerful social and cultural forces are behind rural population loss, it is not just a question of economics.* Exposure through higher education or professional experiences to new ideas, more plentiful community amenities, and more diverse people makes the choice to live a small community less likely. Demographics are also important, since as a group, people born after the mid-1960s are more secular, more welcoming of diversity, and more open to changing social norms, such as divorce or gay marriage, than previous generations (Taylor 2014). The interviews showed that, as a group, rural Iowa residents are more conservative in their beliefs and values and want to live in a community with people who share their views. Some residents reported limiting their professional ambitions in order to return or to stay in their rural town; they viewed this as a positive personal choice that benefits them and their families in ways that are more social and cultural than economic.
- *The profile of people who leave rural places is different than people who leave urban places.* Interviews suggest that rural out-migration is linked to opportunity and not significant change in the rural place itself. Rural residents reported that for their children or for neighbors who had moved away, the small town no longer fit with their life aspirations. This could be described as the pull of a new place that draws people out from small towns. Whereas in a city, it is a push. Many white urban residents left cities in the latter half of the twentieth century because of changing racial demographics and inexpensive housing in the suburbs. As populations dropped and urban quality of life suffered, poor city services, failing schools, drugs, and violence pushed additional people and opportunities to the suburbs. Those who left cities often had more financial and professional resources at their disposal than the primarily minority and immigrant residents who remained. More recently,

people have migrated out of growing cities with high concentrations of wealth, because housing is no longer affordable.

- *Rural places struggle to develop multidimensional economies beyond their historic function as service centers for nearby farms.* There are now fewer farming families living outside of small towns, and they need fewer services, therefore the economic portfolio of rural towns must diversify. When satisfactory jobs remain within commuting distance, incomes are stable, but local shops, restaurants, and small businesses often lose customers as people spend more time and money outside of the community. Residents spoke in interviews about easy accessibility by car to big box stores and the negative impact of this on the viability of small downtown shops that had been a mainstay of spatially isolated rural communities until recent decades. This combination of factors creates a challenging regional economic outlook beyond agriculture-related industries. Although overall income levels were similar in smart-shrinking and declining towns, the ISTP data showed some growth in manufacturing jobs in the smart-shrinking towns since 1990.
- *Rural smart shrinkage requires committed local leaders.* Local residents volunteer more often and spend more hours doing community service in smart-shrinking towns than in other places. Private philanthropic groups and active non-governmental organizations fund and manage local programs and social events. Interview data shows that these activities are led by a local elite, who typically work in higher-paid professions and have higher educational attainment than the average resident. In the best cases, the leaders become mentors to younger people interested in future leadership roles, so that there is a next generation to continue with the work. For example, in one town, young members of a civic organization use social media and online communication tools to share information and build a strong community identity. They run an active Facebook page that draws a regional audience; the page has been liked by ten times more people than the total population of the

town. In declining towns, interviews pointed to problems such as an entrenched elite that blocked others from leadership positions and the disappearance of previously strong community organizations. Without encouragement and role models, new and younger residents in declining towns are less likely to participate in community-building efforts.

These seven principles of rural smart shrinkage show the distinct challenges for small and rural communities. While some problems can be addressed, such as increasing participation in QoL initiatives and becoming more welcoming to new and younger people, some exceptional qualities of rural settings are beyond the control of any one community. The general trends indicate that in the future more younger and highly educated people will choose to live in larger and more diverse communities than in small and rural ones, economic opportunities will cluster in metropolitan regions, and populations will continue to shrink in rural places (Cromartie 2018; Kusmin 2016; Parker et al. 2018; Taylor 2014). These are the given conditions for rural places, especially in Iowa and the Upper Midwest. Discussions of smart shrinkage in rural settings must acknowledge these specific challenges so that recommendations will focus on those specific aspects of community QoL that can be improved through purposeful collective action.

Comparing Smart Shrinkage, Decline, and Smart Growth in Rural Towns

Unlike studies of urban shrinkage that propose new more sustainable futures for cities and adaptations that will eventually reverse population loss, one of the goals of this project is to focus the rural smart shrinkage discussion at the scale of an individual community and on aspects of QoL perceptions over which they can exert some control. The data shows that economics are less important to people's perceptions than might be assumed, and the most valued qualities relate to social connections and attachment to place. The multidimensional data analysis showed that some QoL variables could be isolated from the shrinkage itself, because small towns with similar

percentages of shrinkage had significantly different dimensions and directions of change from 1994 to 2014. In other words, the QoL trends diverged for towns of similar sizes that lost similar percentages of people, jobs, and occupied housing units from 1994 to 2014. Some communities improved their QoL metrics, while others saw significant negative change. The project findings rely on the unique baseline data from the Iowa Small Town Poll (ISTP) to established norms in small and shrinking towns. This step was critical to identifying statistically significant deviations on QoL metrics within the group of 99 participating towns.

The following sections summarize the findings of this quantitative and qualitative data analysis. Features of smart shrinkage, decline, and smart growth were compared using U.S. Census and the Iowa Small Town Poll (ISTP) data. The qualitative research on QoL perceptions and narratives shared by residents in interviews were then integrated into a broader picture of Iowa and the local context of each town. From this integrated analysis, the team developed a synthetic understanding of the characteristics of smart shrinkage in the setting of rural Iowa.

The analysis uses ISTP data gathered from longitudinal surveys conducted in Iowa in 1994 and 2014. Small towns are defined as municipalities not adjacent to a metropolitan city (50,000 or more) that had populations between 500 and 10,000 people in 1990.¹⁰ The response rate for surveys mailed to residents (*RR3*) was 72.7 percent ($n=10,796$ respondents) in 1994 and 41.5 percent ($n=6,163$) in 2014. In each wave, the sampled communities were representative of all Iowa towns meeting the ISTP criteria, based on decennial Census data (Besser et al. 2015). Secondary data for sampled small towns are ZIP code estimates obtained from the 1990 Decennial Census and the 2008-2012 American Community Survey (ACS).

The interviews were conducted with stakeholders in the seven communities in person or over the phone. Potential informants were invited to participate based on their role within the community such as city clerk, mayor, school board member, police chief, leader of a civic

¹⁰ Data is collected by the ZIP postal code associated with each town.

organization, or religious leader, and contact information gathered from public sources. After contacting 96 potential interviewees by phone and/or email, the team completed 45 one-on-one semi-structured interviews (33 in smart-shrinking towns and 12 in declining towns with at least 4 interviews and no more than 8 in any one community). Each meeting followed a prepared interview script that asked respondents to consider QoL perceptions in relation to population change. At the end of each interview, participants were prompted to recommend additional people to speak with, leading to contacts beyond the stakeholder lists. The interviews were recorded and transcribed, then analyzed using grounded theory coding (Charmaz, 2001; Hamideh, 2015; Strauss & Corbin, 1998).¹¹

Shrinkage is operationalized using three indicators: percent change in population to measure population shrinkage; percent change in local jobs to measure economic shrinkage; and percent change in occupied housing units to measure physical shrinkage. In Iowa, the analysis showed that population shrinkage on its own was the strongest indicator of shrinkage. To assess the smartness of the communities' efforts to maintain and improve quality of life, the team created a QoL index that averaged the ISTP results for seven QoL dimensions: local jobs, medical services, public schools, housing, local government services, child care services, and senior services (Cronbach's alpha of 0.777 in 1994 and 0.841 in 2014). After eliminating towns from the group of 99 with average changes on the shrinkage metrics and QoL perceptions (0.5 standard deviation around the mean), the team focused on communities that had above or below average changes.

From the group of 99 towns, seven had faster than average shrinkage (less than -0.25 standard deviation below the mean) accompanied by above-average gains in perceptions of community QoL (more than 0.25 standard deviation above the mean). Presented in Table 20.1, the metrics for the group of smart-shrinking towns from 1994 to 2014 indicated that population fell by

¹¹ The detailed grounded theory analysis of the interview data is in preparation for a future publication.

-14.0 percent, local jobs by -32.3 percent, and occupied housing units by -9.5 percent in that time. Over the same period, QoL as a composite metric across the seven dimensions grew by 10.6 percentage points. On the other hand, in 12 *declining* towns with similar levels of shrinkage from 1994 to 2014, the QoL composite metrics worsened by -2.3 points while populations dropped -12.5 percent, jobs dropped -24.1 percent, and housing dropped -6.3 percent. As a comparison, in eight thriving towns with increases in population and also improving perceptions of QoL (*smart growth* in the quadrant analysis), populations grew 38.9 percent, jobs gained 48.9 percent, and occupied housing unit increased by 42.9 percent. The composite QoL metrics for smart growth towns increased in that period by 13.2 points.¹²

Table 20.1 about here

Rural Smart Shrinkage: Education and Family Life

In comparing smart shrinkage and decline in specific groups of shrinking towns from the ISTP data, one finds that although populations were similar (1,295 vs. 1,441 in 2010), smart-shrinking places had much lower population densities (30.1 vs. 79.9 people per square mile), indicating geographically larger towns. Population differences in Table 20.2 show that smart-shrinking towns had more children under 18 years of age (24.6 vs. 23.0 percent), fewer single-headed families with children (21.0 vs. 27.7 percent), and more college graduates (17.8 vs. 14.6 percent). There were no differences in the minority, elder, or low-education populations. Faster growth in college graduates (6.3 vs. 4.6 percent) and slower growth in single-headed families (6.7 vs. 11.4 percent) signals improving social conditions in the group of smart-shrinking towns when compared to those in decline (Peters, 2013).

¹² A general linear multivariate model (MANCOVA) is used to test mean differences controlling for population size in 2010 using the Games-Howell Test, which corrects for unequal group sizes and unequal group variables.

In comparison to smart-shrinking towns, smart growth towns differed by having much larger population densities, far more minority people (especially Hispanics), fewer older residents over 65 years of age, and better educated residents with low numbers of high school non-completers and more college graduates. However, smart growth places also had many more single-headed families versus shrink smart towns, a correlate of potentially at-risk children. Along with growing populations, smart growth towns saw faster increases in the percentage of minority residents and college graduates; declines in the elder population; and large drops in those without a high school degree. In Iowa, most smart growth towns saw population gains due to in-migration of minorities (mostly Hispanic) to work in food manufacturing industries. The fact that QoL is high and growing suggests these smart communities have been successful at integrating new residents who are quite different from long-term residents (Peters, 2019b; Peters and Zarecor, 2017). Information on demographic differences is presented in Table 20.2.

In the interviews in two smart-shrinking towns, residents linked population change with educational attainment and housing costs. They suggested that a lack of professional job opportunities led some segments of the working population with better skills and more professional ambition to leave. At the same time, it was repeatedly noted that inexpensive housing was attractive to both working and non-working populations and their families. Descriptions of the incoming population from the interviews can be categorized into two major groups: 1) people who are employed in towns or cities within commuting distance who moved in to take advantage of affordable housing costs, 2) more transient groups who moved in due to very low housing costs regardless of job opportunities.

Rural Smart Shrinkage: Quality of Jobs

There are very few differences between smart-shrinking and declining towns in terms of employment characteristics, which are detailed in Table 20.2. Both sets of shrinking places were

statistically similar with regard to labor force participation, income and poverty, and local employment structure. However, there are some notable differences. Smart-shrinking towns had larger shares of people employed in agriculture (9.1 vs. 7.5 percent), but these jobs have contracted at double the rate since 1990 (-6.1 vs. -3.2 percent). Smart-shrinking towns also had fast growth in goods-producing jobs (manufacturing, constructing, and mining), while declining towns posted losses over the same period (6.2 vs. -1.7 percent). On the other hand, smart-shrinking towns lagged behind declining ones by having fewer full-time and full-year jobs (66.7 vs. 71.1 percent); slower job growth in transportation services, telecommunications, and utilities (0.4 vs. 1.9 percent); and slower growth of high-skill jobs in professional services, education (K-12 and college), and healthcare (0.7 vs. 3.3 percent). In short, smart-shrinking places are strong on traditional rural employment sectors like agriculture and manufacturing, while declining towns are becoming increasingly dominated by the service sector.

In the interviews, the team found strong acceptance of the notion that many people commute to their jobs. Also, a regional distribution of commuters from small towns was described in which factory jobs are closer to home requiring shorter commutes, while higher-skill jobs are in larger cities farther away. The perception is that commuting from these small bedroom communities is easy and the additional costs and time are more than justified by the affordable housing costs and feeling of safety that comes from living in a community of like-minded and familiar people.

Using ISTP data to contrast smart growth with both smart-shrinking and declining towns fills out the picture even more. Smart growth towns had higher labor force participation and more full-time/full-year jobs; more jobs in goods-producing industries; more jobs in professional services, education, and healthcare; and fewer jobs in agriculture and low-skill/low-wage retail and leisure services. Middle-skill and middle-wage jobs are desirable for small towns because they provide good wages and benefits, while still being accessible to residents without high levels of

education. Jobs in manufacturing, construction, transportation, telecom, and utilities all fall into this category. By contrast, high-skill and high-wage jobs in professional, education, and healthcare services are also desirable, but they require high levels of education and training that often disqualify many residents in small towns (Peters et al. 2018).

In the interviews, the focus of employment concerns for residents of shrinking small towns is less on job availability and more focused on the type of jobs and low wages. The ISTP data shows that the most common jobs are related to agriculture-supporting businesses, healthcare, and schools. One of the recurring concerns about types of available jobs is that some of the lower-wage jobs have high rates of turnover, which makes it more difficult for small towns to attract new hires to become long-term residents.

Rural Smart Shrinkage: Income and Wealth

There are no statistical differences in incomes or inequality between smart-shrinking and declining towns (refer to Table 20.2). This indicates changes in QoL are probably not driven by wealth differences across the towns. Both smart and declining towns had a median income of about \$48,000, below the average for Iowa (\$51,130) and the U.S. (\$53,050). About 13 percent of residents in both sets of shrinking towns lived in poverty, a bit higher than the state rate (12.2 percent), but far below the nation (14.9 percent). Income inequality was measured using the Gini coefficient, where scores closer 1.0 indicate greater income disparities. Inequality for both groups of shrinking towns was below average (0.390) compared to the rest of Iowa (0.430) and the nation (0.471). The only difference between smart-shrinking and declining towns is median home values, where property in smart towns was higher valued (\$96,734 vs. \$85,939) and appreciated much faster in real dollars since 1990 (61.3 vs. 45.2 percent). Higher home values are a good indicator of both the condition of properties and market demand for homes (Hospers and Syssner, 2018).

The qualitative data found a less optimistic perspective among residents about housing in smart-shrinking towns. In both smart and declining small towns, the quality of existing housing is often evaluated as low or declining; a view strongly supported by many participants in various stakeholder positions. There is a clear shortage of decent quality low-income and affordable housing in all of seven of the case study towns as well as abandoned and occupied but dilapidated homes that become a burden on the local government or sometimes local community betterment groups. In interviews, many residents expressed the opinion that lack of acceptable quality affordable homes and the presence of abandoned or dilapidated homes are partly to blame for the difficulty of attracting new families to small towns.

In comparison, smart growth towns show strong upward income trends. Household incomes were higher and growing faster than in smart-shrinking and declining towns; and also had lower rates of poverty and inequality that fell over the past two decades. Home values were much higher than in shrinking places, although the rate of appreciation over time was the same as in smart-shrinking towns. This suggests that positive QoL perceptions can increase the price of homes even in the context of shrinkage.

Table 20.2 about here

Rural Smart Shrinkage: Social Capital

Social capital is defined as feelings of trust, norms of cooperation, and social networks that exist in a community that facilitate coordinated actions (Robison and Ritchie, 2010). Bonding social capital are ties between very similar people based on emotional bonds, such as close friends and family. By contrast, bridging social capital are ties between very diverse and unfamiliar people based on achieving some common goal (Ferlander, 2007; Poortinga, 2012). Research has shown that bridging social capital is critical for community development (Halstead and Deller, 2015). The

ISTP data, presented in Table 20.3, shows that bridging ties are stronger in smart-shrinking versus declining towns (58.5 vs. 55.4 on a 100-point scale). Although it has weakened over time in all of the shrinking towns, the decline in bridging ties was slower in smart towns than in declining places (-4.1 vs. -7.9 points). Even though the seven case study towns in the project are small (with populations ranging from 528 to 2,074 in the 2018 Census Estimate, and averaging 1,103), they each have multiple active civic groups that represent some level of bridging social capital. There were no statistical differences in bonding social capital in smart-shrinking or declining towns, but rates were stable in smart towns while they have fallen since 1994 in declining towns (0.3 vs. -1.3 points).

In comparison, residents in smart growth places had higher bonding social capital that has strengthened over time. These communities also had slightly stronger bridging social capital that has remained stable, instead of weakening. This may be attributable to the presence of sizable minority populations that increase within-group connections, but also foster between-group links out of necessity. People in smart growth towns were just as civically engaged and just as attached to their community as residents in smart-shrinking towns, although attachment declined more slowly in smart growth towns since 1994.

Civic engagement is an important indicator of pro-active and thriving communities (Flora et al. 1997). The ISTP data shows that in smart-shrinking towns nearly half (46.6 percent) of all residents reported participating in a community improvement project in the past year, compared to only two-fifths (42.8 percent) in declining places; in both contexts the rates are higher than the national average for rural communities (30.9 percent in 2003 and down to 25.2 percent in 2015) (Grimm and Dietz 2018). On the other hand, civic engagement fell in both sets of shrinking towns from 1994 to 2014, reflecting broader national trends. Membership in organizations is another indicator of civic engagement. Residents in smart-shrinking towns were more engaged in both local organizations (9.7 vs. 9.3 organizations per person) and groups outside the community (0.9 vs. 0.8

organizations per person). Further, residents of smart-shrinking towns have managed to maintain these external links over the past two decades, whereas external links fell in declining and smart growth towns.

Civic groups emerged in the data analysis as essential elements of smartness in the case study towns, because they embody community-level forces of improvement and facilitate collective actions to address the effects of population loss. In interviews, those who are involved in these efforts expressed a more positive evaluation of overall QoL in their towns, but also spoke more critically about conditions that they want changed. The team also observed considerable differences in the seven case study towns with respect to the contributions of governmental versus non-governmental/civic groups in responding to shrinkage. The evidence suggests that non-governmental/civic groups contribute more to the development of a vision for the future of smart-shrinking towns than local government. In the two best examples of rural smart shrinkage, community foundations and civic groups provide significant financial support and volunteer hours for social activities and community betterment efforts.

Rural Smart Shrinkage: Safety and Trust

Besides simply documenting differences in population and economy, it is also important to understand how people think and feel about living in their communities. The data in Table 20.3 shows that residents in smart-shrinking compared to declining towns rated their communities as safer (81.3 vs. 78.6 on a 100-point scale), more trusting (69.9 vs. 66.8), better kept-up (68.4 vs. 62.3), and more open to new ideas (61.4 vs. 56.1). Smart-shrinking towns also tended to be slightly more supportive and tolerant of others in the community. Importantly, these positive perceptions have become stronger in smart-shrinking places over the past two decades. The largest differences between smart and declining places were on being better kept-up (0.5 vs. -6.7 points), more open to

new ideas (4.7 vs. -1.1 points), more trusting (2.0 vs. -2.4 points), and being safer (4.7 vs. 0.6 points) than in 1994.

From the interviews, the team observed that perceptions of quality of life are, to some extent, driven by social norms such as trust and support for community and lifestyle preferences, more so than from pragmatic concerns about infrastructure and services in town. There is a general attitude in smart-shrinking towns that people can tolerate or accept that the quality and availability of jobs, housing, recreation, retail, healthcare, social services, schools, and infrastructure, are not going to improve much beyond some small changes. They draw upon their positive and strong sense of social ties, trust, support, and attachment to place when asked to think about the quality of community services, limiting the effects that any dissatisfaction might have on their perceptions. This is an adaptation strategy that helps to build community resiliency.

Compared to smart-shrinking places, smart growth towns were more friendly (79.4 vs. 76.7), more well-kept (74.43 vs. 68.4) and slightly more tolerant (68.3 vs. 66.1). Smart growth towns also become more open to new ideas (8.0 vs. 4.7 points) and more friendly (4.0 vs. 1.4 points) than their smart-shrinking counterparts. In short, residents in smart-shrinking towns view their communities much more positively than residents in declining towns. In smart growth places, the metrics improve even more for friendliness, quality of the environment, tolerance, and openness to new ideas.

Table 20.3 about here

Recommendations for Rural Smart Shrinkage

The comparison of smart-shrinking and declining towns (using ISTP, Census, and interview data) and previous research on shrinking communities (Peters 2019a; Peters and Zarecor 2017) yields recommendations for places looking to implement strategies for smart shrinkage.

Importantly, if shrinkage is a given context as argued here, small rural communities should not wait to experience signs of decline before acting. The first priority should be building social capital and improving community services through purposeful collective action. In smart-shrinking towns, the team observed multiple collective efforts that positively influenced residents' desire to remain with some former residents even choosing to return and residents of nearby towns participating thus expanding the reach of these efforts to a regional scale. Such actions are more important to community well-being than trying to reverse the population loss by reaching outside of the community to attract new people or more jobs. Programs to spur growth are costly, slow, and unproven, and also affected by factors largely outside of the control of any one town.

Primary recommendations for shrinking towns to enhance QoL are to build bridging social capital connections, increase civic engagement, and create a culture of openness to ideas and support among all members of the community. Active and engaged local civic leadership, private philanthropic initiatives, and working to collectively address problems are qualities observed by our team in smart-shrinking towns. Younger people and families with children are critical elements in these initiatives; they anchor intergenerational community efforts that allow mentoring of new leaders and result in QoL improvements for all age segments. Bridging social capital can be enhanced by fostering diverse and inclusive linkages between residents. This includes working across dividing lines such as economic class, race and ethnicity, gender, and even newcomers versus long-time residents. To increase civic engagement, a community can encourage residents to participate in local projects and to join local and outside organizations. Being inclusive in this area is important, because the community will be better able to identify relevant community needs and gain broad support if more people are part of the process. Other benefits of reaching into and working with different community segments are better access to the full range of human and financial resources that exist in the community and better management of conflicts as they arise, so that projects can succeed. Each town will need to assess what inclusion means in their local setting.

Many rural places are not diverse in terms of race and ethnicity, but do have many other forms of diversity that are equally important to these efforts and can be overlooked.

Creating a culture of openness and support is critical to the success of these efforts. Shrinking towns can nurture this culture by focusing on the personal, process, and physical aspects of community well-being. Personal aspects speak to emotional needs, such as how safe residents feel in their town, whether they can trust their neighbors, and if they feel the community is supportive of themselves and others. Process aspects deal with public deliberation and decision-making, such as a community's openness to new ideas and consideration of alternative solutions. Physical aspects are whether residents feel their town is being kept up and is worthy of future investment, or whether it is too run down and not worth the investment. Smart-shrinking towns do a better job at fostering these positive perceptions and providing for the emotional needs of their residents.

Secondary recommendations for shrinking towns are to stabilize agricultural employment and grow jobs in goods-producing industries. Efforts in this area often require sizable financing and long-term planning and carry significant risk, because the community has little control over national policy or global economic conditions. As summarized in the findings, data indicates that smart shrinkage does not depend largely on geography, income differences, or a community's economic base. However, a higher percentage of residents in smart-shrinking towns earn their livelihoods from agriculture and related services than in declining towns. The future outlook for these jobs is uncertain as the number has dropped rapidly over the past 20 years. On the other hand, smart-shrinking towns in Iowa saw job gains in goods-producing industries like manufacturing and construction—jobs that have declined sharply in other small towns. This may be due to local self-development, industry specialization, or state policies favorable to these industries. The key role that the agriculture and manufacturing industries play in higher QoL is the opportunity for middle-skill and middle-wage jobs, many of which are full-time and full-year

positions with good benefits. These middle-skill jobs are a good fit for the rural labor force. Communities should use local and state economic development programs to recruit and retain middle-skill jobs in agriculture and the goods-producing sector, and also encourage their younger residents train for such positions at colleges, universities, and as apprentices.

As a set of recommendations, those related to social capital are inexpensive to implement, actionable in the near-term, and not dependent on larger socioeconomic or political forces. In all shrinking places, economics are less important to perceptions of QoL than might be expected. This should be encouraging for rural towns as efforts that focus on people and existing community assets do not require external support or financial incentives. Purposeful collective actions and the resulting positive effects on QoL perceptions may stabilize population numbers and even slowly lead to growth in some cases, but the primary goals for shrinking communities should be to invest in building social capital and improve community services to protect against decline.

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Table 20.1. Indicators of Shrinkage and Quality of Life

	Base in 2010 / 2014			Change from 1990 / 1994		
	<i>Shrink Smart</i>	<i>Decline</i>	<i>Smart Growth</i>	<i>Shrink Smart</i>	<i>Decline</i>	<i>Smart Growth</i>
Shrinkage						
Population (#) ^{ab}	1,295	1,441	5,079 *	-14.04	-12.47	38.86 *
Local Jobs (#) ^{ab}	260	320	888 *	-32.31	-24.10	48.88 *
Occupied Housing Units (#) ^{ab}	545	608	2,041 *	-9.53	-6.32	42.85 *
Quality of Life						
Overall (0-100)	54.65	44.55 *	61.41 *	10.64	-2.26 *	13.23 *
Jobs (0-100)	34.46	24.70 *	42.49 *	8.96	2.06 *	14.60 *
Medical Services (0-100)	56.14	42.77 *	59.09	15.45	0.50 *	19.99
K-12 Schools (0-100)	68.73	64.49 *	87.23 *	4.88	-5.18 *	9.45 *
Housing (0-100)	49.87	44.51 *	60.12 *	9.79	-0.16 *	13.58 *
Local Government (0-100)	64.59	57.30 *	67.67 *	14.74	4.26 *	16.83
Child Services (0-100)	57.45	39.85 *	62.68 *	17.78	-3.60 *	14.60
Senior Services (0-100)	51.28	38.24 *	50.60	2.90	-13.71 *	3.57

Notes: * $p < .05$ and † $p < .10$ statistical difference from Shrink Smart mean using Games-Howell Test holding 2010 population constant at 2,632 (Source: Cohen et al. 2003)

a denotes actual mean without population constant

b denotes percent change

Table 20.2. Demographic and Economic Indicators

	Base in 2010			Change from 1990		
	<i>Shrink Smart</i>	<i>Decline</i>	<i>Smart Growth</i>	<i>Shrink Smart</i>	<i>Decline</i>	<i>Smart Growth</i>
Demographics						
Population Density (sq.mi.) ^a	30.06	79.90 *	152.96 *	-4.12	-8.00	27.76 *
Minorities (%)	3.97	3.62	8.64 *	2.87	3.01	7.23 *
Age 17 & Under (%)	24.64	23.02 *	25.41	-2.64	-3.35	-2.21
Age 65 & Older (%)	21.26	20.54	16.10 *	0.56	0.32	-2.37 *
Single-Headed Families w/ Children (%)	20.96	27.74 *	26.44 *	6.70	11.38 *	9.84
High School Non-Completers (%)	11.82	12.90	9.61 *	-9.82	-11.42	-14.21 *
College Graduates (%)	17.80	14.56 *	20.88 *	6.28	4.59 *	10.09 *
Employment						
Employment Participation (%)	47.00	47.28	52.51 *	2.74	3.57	6.50 *
Full-Time & Full-Year Jobs (%)	66.68	71.10 *	71.63 *	5.44	6.37	7.68
Agriculture & Natural Resources (%)	9.07	7.54 *	3.62 *	-6.09	-3.24 *	-6.51
Goods Producing (%)	25.21	24.30	30.01 *	6.21	-1.70 *	5.22
Transport, Telecomm & Utilities (%)	7.62	7.72	6.84	0.44	1.90 *	0.46
Professional, Health & Educ Svcs. (%)	28.83	30.85	32.84 *	0.71	3.29 *	6.57 *
Retail & Leisure Svcs. (%)	23.03	22.85	19.92 *	0.50	1.68	-3.75 *
Income						
Median Household Income (2018\$) ^b	\$48,329	\$47,330	\$60,188 *	13.26	10.33	23.87 *
Gini Income Inequality (0-100)	39.67	39.26	36.77 *	1.70	2.46	-0.67 *
Poverty (%)	13.36	13.03	8.65 *	1.32	1.28	-1.75 *
Median Home Value (2018\$) ^b	\$96,734	\$85,939 †	\$133,010 *	61.27	45.17 *	69.58

Notes: * $p < .05$ and † $p < .10$ statistical difference from Shrink Smart mean using Games-Howell Test holding 2010 population constant at 2,632 (Source: Cohen et al. 2003)

a denotes actual mean without population constant

b denotes percent change

Table 20.3. Social Capital and Civic Engagement Indicators

	Base in 2014			Change from 1994		
	<i>Shrink Smart</i>	<i>Decline</i>	<i>Smart Growth</i>	<i>Shrink Smart</i>	<i>Decline</i>	<i>Smart Growth</i>
Social Capital						
Bonding Social Capital (0-100)	66.14	64.89	68.47 *	0.34	-1.33 *	3.09 *
Bridging Social Capital (0-100)	58.49	55.44 *	60.39 †	-4.07	-7.91 *	-0.80 *
Membership in Outside Groups (#)	0.91	0.77 *	0.71 *	0.05	-0.05 *	-0.15 *
Membership in Local Groups (#)	9.72	9.25 *	9.92	-2.90	-2.62 †	-2.51 *
Civic Engagement						
Participated in a Town Project (%)	46.55	42.77 *	43.63	-4.21	-5.25	-5.38
Community Attachment (0-100)	47.27	46.75	46.95	-6.95	-5.63 †	-3.87 *
Years Lived in the Community (#)	36.13	35.88	34.11	2.22	5.10 *	3.61
Community Perceptions						
Friendly (0-100)	76.73	75.73	79.36 *	1.41	-1.28 *	3.98 *
Safe (0-100)	81.28	78.60 *	82.77	4.70	0.57 *	3.76
Supportive (0-100)	70.07	68.07 †	71.82	5.53	2.30 *	6.32
Tolerant (0-100)	66.07	64.35 †	68.28 †	11.14	7.82 *	13.35
Open to New Ideas (0-100)	61.37	56.13 *	62.17	4.69	-1.13 *	7.96 *
Trusting (0-100)	69.87	66.78 *	71.31	2.01	-2.41 *	2.46
Well-Kept (0-100)	68.37	62.28 *	74.43 *	0.53	-6.73 *	1.72

Notes: * $p < .05$ and † $p < .10$ statistical difference from Shrink Smart mean using Games-Howell Test holding 2010 population constant at 2,632 (Source: Cohen et al. 2003)