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POPULATION CHANGE, ECONOMIC RESTRUCTURING, AND THE EVOLVING LANDSCAPE OF RETAIL ACTIVITIES IN THE RURAL GREAT PLAINS*

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ABSTRACT

Over the past 15 to 20 years, changes such as retail concentration (fewer, larger stores owned by fewer corporations), technological innovation, and new labor practices have transformed the retail industry. These broad changes affect rural communities where the retail sector still employs a large portion of the workforce. When combined with the declining population of many rural areas in regions like the Great Plains, the impact of retail change is even more significant. Explored in this paper is how restructuring in the retail sector is accelerating the loss of retail firms in many rural parts of the Great Plains, a region already suffering retail losses from depopulation processes and increased accessibility to larger urban retail centers. The analysis presented will show the changes in retail that took place between 1988 and 1999, and investigate how retail restructuring and demographic change interact at the county level to produce new rural economic landscapes for people in the Great Plains, a situation that is likely to be found in other rural areas with similar demographic structures.

Introduction

The depopulation of the Great Plains over the past century has been a cause of great concern for government officials in the region (Rowley 1998). As people move out of the region (a USDA defined area with 477 counties in 11 states that runs from the Dakotas to Texas), every portion of the community is affected, including impacts to local incomes, the tax base, and the provision of goods and services from the public and private sectors. In addition, improvements in transportation that increase accessibility between major urban centers and nearby rural areas have resulted in a decline in many rural businesses as people travel farther for the goods and services they need and use regularly (Johansen and Fuguitt 1979). Finally, in recent decades changes in the structure of many economic activities have created another set of problems for many rural communities. Retail, an important part of the rural economy in the Great Plains, has undergone a restructuring process that has radically changed the nature of the industry, and how it serves its customers (Vias 2004). These changes include retail concentration (fewer, larger stores owned by fewer corporations), technological innovation, and new labor practices.

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The combination of forces affecting rural retail—population losses, increased accessibility to urban centers, and the more recent phenomenon of restructuring within the retail sector—are driving change in the retail landscape of the Great Plains in different ways. The overall outcome of these changes has generally been for the worse. The goal of this paper is to examine recent trends in the retail sector in the Great Plains between 1988-1999. Additionally, in this paper several different factors leading to retail change in the region are presented and analyzed, especially the role of retail restructuring. Using county level data, also gauged are the impacts of these broad social and structural changes on the quantity and quality of retail activities.

As the findings demonstrate, retail in the Great Plains is changing in a way much different from other parts of the tertiary sector (that large portion of the economy that provides public and private goods and services), resulting in broad declines with respect to the number and variety of retail stores present in rural areas. The collective impact of the processes driving change in retail activities is creating additional burdens for Great Plains communities already facing a host of major problems. Although the geographic focus of this paper is the Great Plains, many issues with respect to retail change discussed may have relevance to other rural areas in the United States, especially those with stagnant or declining populations. The broad trends in retail restructuring outlined here and in other papers (Vias 2004) will even have impacts for rural parts of the United States such as the South that are experiencing population growth.

This paper is structured as follows. The first section provides background on demographic change in the Great Plains, and a brief review of changes in the retail sector over the past 20 to 30 years. This is followed by a discussion of the data and methodology of the analysis. To highlight the unusual changes that make retail distinct from other tertiary activities, the first empirical section contains a broad examination of trends in the retail, FIRE (finance, insurance and real estate), and service sectors for nonmetropolitan Great Plains counties between 1988-1999. This section also focuses more closely on trends in population, and changes in the number of employees and establishments/stores in the retail sector. The second empirical section examines in more detail the loss/gain of particular types of retail functions in counties based on proximity to metro areas, and population size. In the last section the results are summarized and future topics for research are suggested.

Population Decline and Retail Change

A persistent problem in the Great Plains since early in the twentieth century has been a broad decline in population for rural areas (Albrecht 1993; Popper and Popper 1987; Rathge and Highman 1998). While overall population in the region has actually grown, most growth has been in a few large urban centers. For a vast majority of counties, persistent decline since the 1930s is the norm. A brief revival in many nonmetro areas in the 1970s (the rural Renaissance) was not widespread in the Great Plains. The downturn resumed in full force anyway in the 1980s, and persists to this day (Schacht et al. 2003).

Much of the population decline has been attributed to changes in agriculture that have led to a decrease in the number of farms and farmers (Rathge and Highman 1998). With the decline in agriculture, employment opportunities for young workers have dwindled, driving out many of the young and their families. Since most of the tertiary sectors are driven primarily by local demand, it logically stands to reason that with broad declines in rural population, the long term viability of these sectors would also decline. Thus, the negative multiplier impacts of declines in basic industries (like agriculture or manufacturing) on nonbasic industries like retail are significant, especially since the nonbasic sectors of retail and services have provided over half the jobs in most parts of the Great Plains over the last few decades (Lonsdale and Archer 1995). In a cross-sectional study of county-level change in the Great Plains over a five-decade span, Adamchak et al. (1999) found a direct connection between population declines and a reduction in retail and wholesale sector employment, although the authors surprisingly found some employment increases in these sectors based on a very limited review of 1990s data, a trend that needs further evaluation.

Besides declines in local retail demand, researchers have noted changes in the central place hierarchy associated with the location and number of retail and service activities (Johansen and Fuguitt 1979). Since the 1950s, better transportation arteries have increased accessibility to urban areas relatively close to rural communities. This has resulted in increased shopping in these urban areas, and a decline in the number and variety of retail and service functions in many rural communities adjacent to urban areas (Galston and Baehler 1995). Increases in commuting to larger urban areas for employment also contribute to shopping in areas farther up the urban hierarchy (Shields and Deller 1998; Tigges and Fuguitt 2003). Hence, what is described here as a “two-tiered system” of areas experiencing growth and decline in retail activities has developed. In this system there are very large urban centers in metro counties (pulling shoppers/workers from adjacent nonmetro counties), and smaller urban centers in nonmetro counties not adjacent to metro counties (pulling shoppers/workers from nonmetro rural counties containing no urban centers) that have generally experienced growth in retail activities, to the detriment of their surrounding nonmetro counties.

Finally, besides the above issues related to changes in retail activity, there are other broad trends in the economy that warrant consideration when evaluating the provision of goods and services in rural areas, trends that have not received nearly as much scholarly attention. For example, as the economies in the developed parts of the world have matured and incomes have risen, the demand for the goods and services provided by the tertiary sector has generally increased (Kirn 1987; Mawson 1987). However, growth in the various tertiary sectors has been uneven—producer and consumer services have grown much faster than the retail sector, especially in nonmetro areas (Vias and Nelson 2006). Despite the slower growth of retail, this broad shift to the tertiary sectors in the economy is one the few positive trends in employment in rural areas.

Contrasting this potential source for employment growth is the restructuring process within such tertiary sectors as retail that is likely to have negative consequences for many rural areas, especially in the variety of retail goods available in rural areas. These consequences may be as significant as those resulting from population change and the increasing market area size of metro counties and nonmetro counties with sizeable urban centers. In the retail sector as a whole, concentration is taking place with fewer and larger companies controlling larger portions of the retail market (Hornbeck 1994; Wrigley 1992, 2002). These large retail companies have several advantages over smaller locally-owned stores, including costs savings generated from significant economies of scale (Stone 1995). Furthermore, logistical innovations and new computer technologies introduced over the last few decades have increased productivity and accelerated the substitution of capital for labor (Fernie 1997; Lowe and Crewe 1996). For consumers, the most apparent change in the retail environment has been in the increased size of stores, most of which are part of large (inter)national chains such as K-Mart, Borders, Lowes, or Best Buy, to name but a few (Stone 1995; Wrigley and Lowe 2002). The ultimate manifestation of this trend has been the development of superstores in the United States over the past 10 to 15 years (e.g., Super Wal-Mart). These stores sell almost every type of retail product under one roof, along with many consumer services as well (e.g., opticians), and now allow for easier one-stop shopping.

This process of retail restructuring is having profound effects throughout America, especially in rural areas (Vias 2004). However, the transformation in the retail sector is quite varied over space, and the outcomes depend on a host of other locally contingent factors (Vias 2004, Vias and Nelson, 2006). The goal of this paper is to investigate and consider some impacts of retail restructuring in the Great Plains, especially with respect to broad depopulation trends and the other processes that have led to the decline of retail in rural parts of the region. Specific questions investigated include the following. What are the amounts, types, and geography of changes in retail employment and stores/establishments for nonmetro Great Plains counties, and how, if at all, does this trend differ from other tertiary activities? In addition, how are different types of socioeconomic processes (e.g., depopulation, changing consumer travel patterns, etc.) transforming retail activities in the region? Finally, which types of retail activities face the largest impact from these processes (e.g., general merchandise, apparel, etc.), and who is hurt the most by retail change, or more specifically, what types of counties are losing various types of retail activities? Overall, the literature on retail has focused only on one or two factors affecting retail activities, neglecting parts of the complex web of processes that are shaping the rural retail landscape (Adamchak et al.1999; Johansen and Fuguitt 1979; Johnson 1985; Stone 1995). The research presented here examines the changes to retail from a broader perspective, providing a more comprehensive picture of an issue important to quality of life in the region.

Data and Methodology

Much of the research on retail and services has been completed at the settlement level (see work of Brian Berry), from small hamlets to major cities. However, for analyzing retail restructuring for a large region such as the Great Plains, analysis at such a small scale is impractical. Besides problems associated with the vast number of settlements that would need to be analyzed, using a larger scale of analysis—in this case, a county—provides access to detailed employment data not available for most rural settlements because of disclosure issues (Lobao 1990).

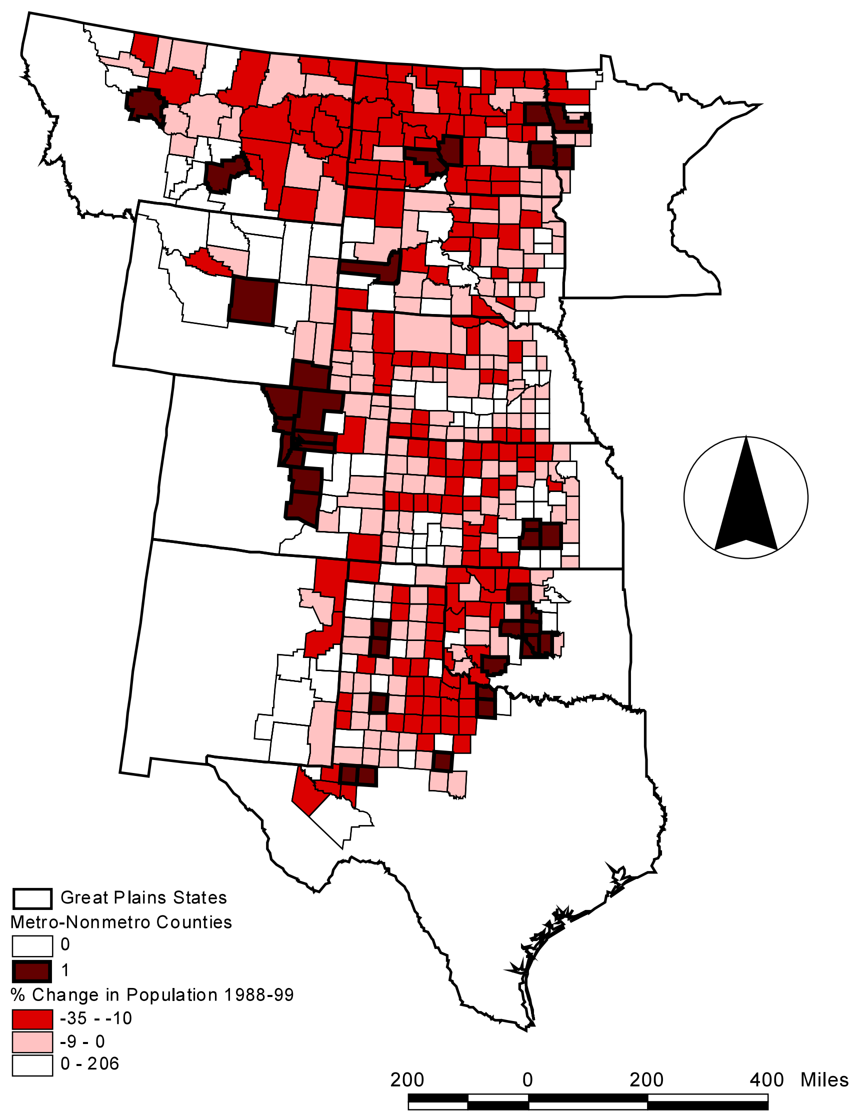
Because of this issue, commercially available data from the Minnesota IMPLAN Group was used. Starting with information from the ES202 data series developed by the Bureau of Labor Statistics, and supplemented with other data from the Census Bureau and Bureau of Economic Analysis (CBP-County Business Patterns and REIS-Regional Economic Information System), IMPLAN uses iterative methods to fill in suppressed data for employment and wages at the 2-4 digit SIC level (IMPLAN, 2000). Besides sectoral detail, these types of data also provide information on self-employed individuals, a major component of many tertiary activities, and have been used successfully in empirical analyses (O'Huallachain 1992; Vias 2004). In this study county-level data from IMPLAN that run from 1988-1999 are used. While the exact years chosen depend on the availability of very expensive data purchased for other research projects, the period fortunately matches an interval of significant change for the retail sector in the US, as well as continued population decline in major portions of the Great Plains (Rathge and Highman 1997; Wrigley 2002). The analysis described below primarily uses aggregate data (number of establishments/stores and employees) for all retail, FIRE and service sectors, along with 2-digit data for the retail sector (SIC 52-58), while population data come from the Regional Economic Information System (Bureau of Economic Analysis 2002). Note that the data represents full and part-time jobs, an issue addressed later in the paper.

The data were collected for 477 counties in the Great Plains based on a regional delineation used by the USDA in recent reports (Rathge and Highman 1998). Overall, this delineation creates a region somewhat larger than other definitions of the Great Plains (see Figure 1). However, this delineation seems adequate for the current analysis, and changes along the margins are unlikely to affect the results significantly. Finally, "rural" is operationalized by using metro/nonmetro county designations, a common practice because of data limitations. Metro/nonmetro designations come from the Beale rural-continuum codes for 1993 (Beale 1993). Using these codes, counties were classified into four categories as done in Adamchak et al. (1999): metropolitan counties (n=40), nonmetropolitan adjacent counties (Beale categories 4, 6 and 8; n=85); nonmetropolitan, nonadjacent, urban counties (Beale categories 5 and 7, or nonmetro counties with urban areas of greater than 2500; n=139); and nonmetropolitan, nonadjacent, and rural counties (Beale category 9, or counties with no urban areas; n=213). This classification permits examination of several issues related to retail, including effects of county population size, and accessibility to large and small urban centers for shopping and employment.

Aggregate Changes in Population and the Tertiary Sectors in the Great Plains

In a report published by the Economic Research Service of the USDA, Rathge and Highman (1997) found that the overall population in the Great Plains had grown between 1950 and 1996. However, most growth took place in metro counties

FIGURE 1. POPULATION CHANGE IN THE GREAT PLAINS, 1988-1999



Source: Bureau of Economic Analysis 2002.

and/or nonmetro counties with significant urbanized areas, while the less urban and purely rural nonmetro counties lost population. Focusing on the geography of population change, three quarters of the counties in the Great Plains showed either continuous decline, or decline with a few periods of growth.

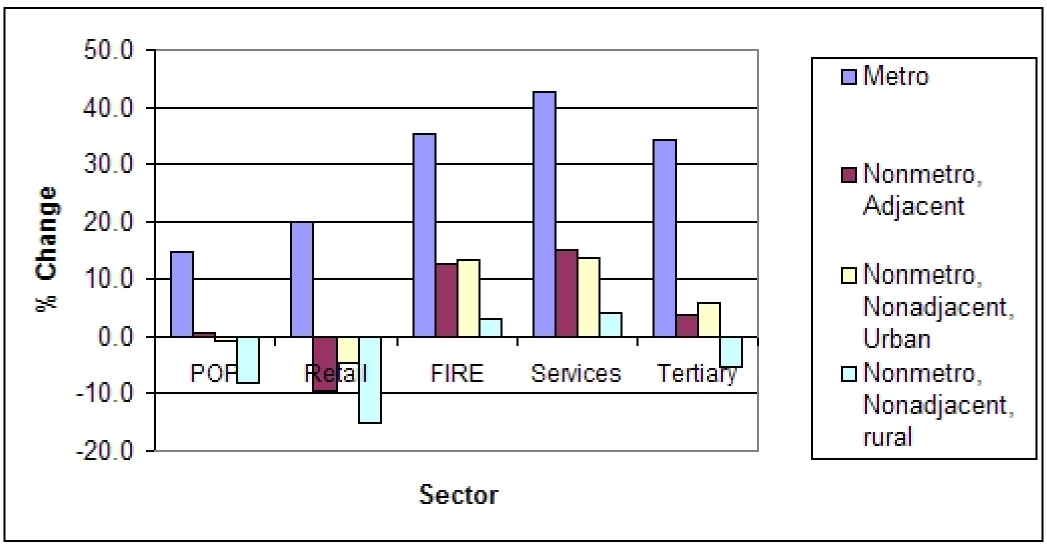
For the limited period of this study, 1988 to 1999, similar patterns are apparent. Overall, population growth for the region was around 7% (Bureau of Economic Analysis 2002). As in previous decades, most of this growth was in the metro counties of the region. Nonmetro counties adjacent to metro counties experienced no appreciable change, while nonmetro counties not adjacent to metro counties lost approximately 3% of their population (this group includes nonadjacent rural and urban counties). This occurred during the 1990s when many nonmetro counties around the United States were experiencing a new burst of population growth (Fuguitt and Beale 1996). The geographic extent of the depopulation problem is also similar to that found in previous decades, with more than 70% of counties losing population, as shown in Figure 1.

The long term consequences of population loss, especially for sectors in the economy such as retail and services driven by local demand, have been considerable. In a previous study, Adamachak et al. (1999) found retail and wholesale employment in the Great Plains dramatically affected by population losses, especially in the most rural areas. In a study of all nonmetro counties in the United States between 1930 and 1970, Johnson (1985) found similar impacts related to population change.

Current data on retail show this broad linkage between population and retail activity continued in the 1990s, but with some differences from previous trends. Figures 2 and 3 show changes in population, the number of establishments/stores and employees for retail, FIRE, and services for 1988 to 1999. The data were aggregated for counties based on the adapted Beale four category classification described above. With respect to population, trends previously noted by researchers are apparent in the current data, with the most rural and remote counties experiencing significant declines over the 11-year period, while metro counties continued to gain population. For different tertiary activities, however, several trends are worth noting. At the broadest level, retail has lagged behind FIRE and services activities on growth in the number of establishments/stores in the Great Plains. In fact, the number of retail establishments/stores declined in the three types of nonmetro counties, even in those county categories that showed no significant population losses (see Figure 2).

Figure 3 paints a very different picture when it comes to employment change in these tertiary sectors. As expected for sectors experiencing growth in the number of establishments/stores, employment growth for FIRE and services was significant between 1988 and 1999. However, retail employment also grew for all types of nonmetro counties during the same period, with growth highest in counties containing large/small urban centers (i.e., metro counties, or nonmetro counties with urban areas that are nonadjacent to metro counties), while employment growth in the nonmetro counties adjacent to these counties grew at a slower pace (i.e., nonmetro counties adjacent to metro counties, or nonmetro counties with no urban areas [completely rural] that are nonadjacent to metro counties).

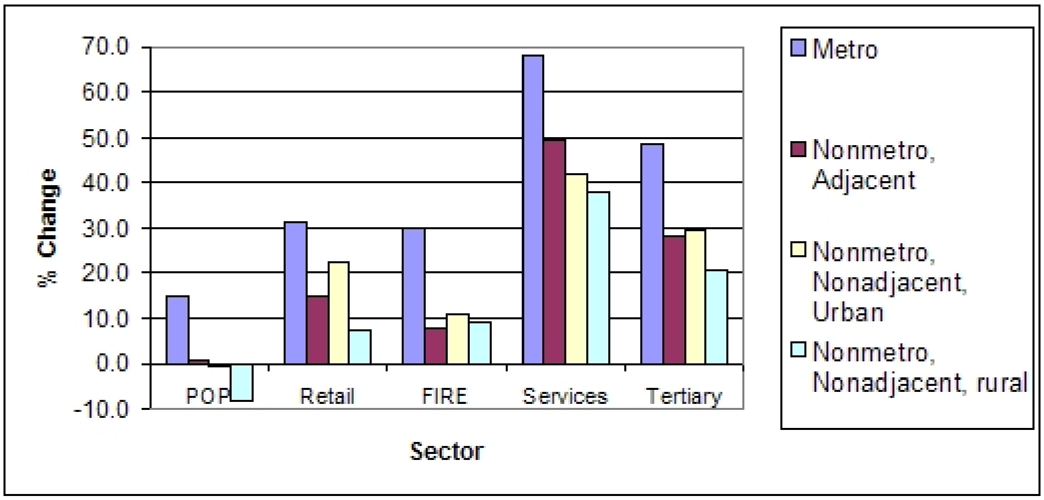
FIGURE 2. AGGREGATE CHANGE IN TERTIARY ESTABLISHMENT/STORES IN GREAT PLAINS COUNTIES, 1988-1999



Source: Bureau of Economic Analysis 2002; IMPLAN 2000.

Figures 3 also shows that for retail employment, the geographical breakdown of counties used here does provide some evidence of the two-tiered effect of increased market areas for retail from improved transportation in rural areas (i.e., shoppers and commuters in counties adjacent to metro counties or completely rural counties taking advantage of a greater variety of goods in metro counties or nonmetro counties with urban centers). Data from the 1990 Census also provide insights on the impact of commuters and long distance shoppers. As Shields and Deller (1998) showed for retail sales in Wisconsin, in the Great Plains nonmetro counties with higher levels of out-commuting (counties adjacent to metro counties [22%] and rural nonmetro counties nonadjacent to metro counties [16%]) showed less retail activity than nonmetro counties with lower levels of out-commuting (nonadjacent nonmetro urbanized counties [10%]) (U.S. Census 2000). Although the nonmetro urbanized counties not adjacent to metro counties also lost retail establishments/stores, the two-tiered effect is also visible here because the drop in establishments/stores was not as precipitous as in the other two types of nonmetro counties.

FIGURE 3. AGGREGATE CHANGE IN TERTIARY EMPLOYEES IN GREAT PLAINS COUNTIES, 1998-1999

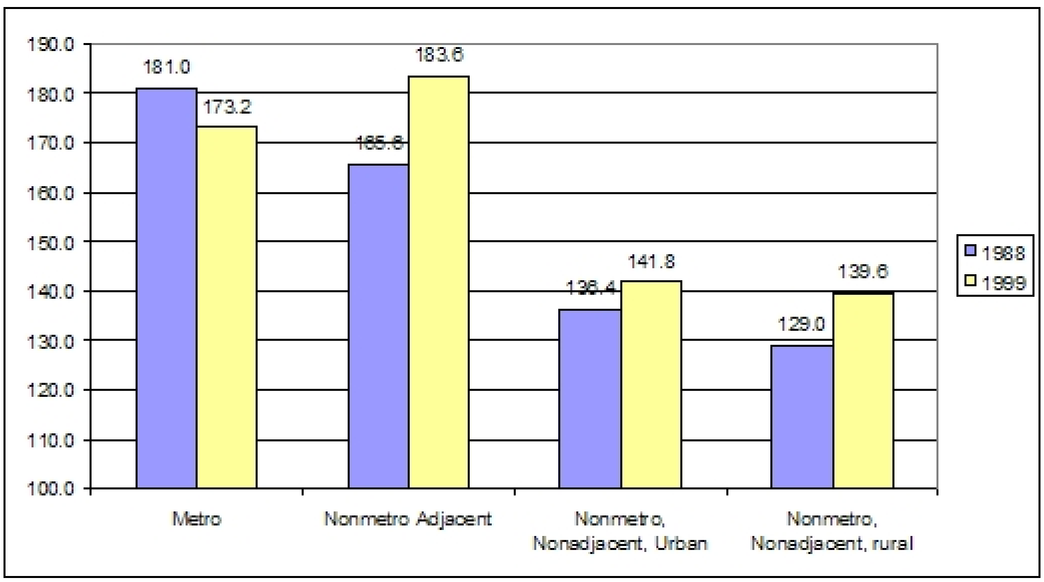


Source: Bureau of Economic Analysis 2002; IMPLAN 2000.

Overall, the most striking aspect of the data is the trend in retail whereby employment grows as the number of establishments/stores declines. A potential source of some growth in employment is the increasing use of part-time workers in the tertiary sectors, especially retail (Freathy and Sparks 1996; Kirby 1993). The fact that the data do not represent full time equivalent employment lends some support to this argument. However, the use of more part-time labor probably does not account for the double digit employment growth experienced in all types of counties over that relatively short 11-year period. Another likely source of the growth in retail employment is a result of increased demand as consumers purchase more retail goods per person, a part of the broader restructuring process being experienced by the entire economy that is described earlier in this paper.

Perhaps more important, the opposing trends found in retail employment and the number of establishments/stores between 1988 and 1999 implies a transformation in the structure of retail in nonmetro counties, with establishments/stores growing larger in scale (employees per establishment/store) (Vias 2004). As Figure 4 shows, the average number of employees per retail establishment/stores has increased for all types of nonmetro counties, with the largest increases found in the counties adjacent to either metro counties or nonmetro counties with urban centers. It appears that this phenomenon is mostly independent of population change since it is also taking place in counties with minimal population losses.

FIGURE 4. AGGREGATE CHANGE IN AVERAGE SCALE OF RETAIL STORES/ESTABLISHMENTS (EMPLOYEES PER STORE) IN GREAT PLAINS COUNTIES, 1998-1999.



Source: IMPLAN 2000.

A large part of this trend may be attributed to the processes of retail restructuring (Wrigley and Lowe 2002), adding to the financial stress facing smaller retailers already contending with population declines and the loss of customers who are willing to travel long distances to access the larger and more diversified shopping centers found in urban areas. In this scenario, it seems likely that only those stores that can take advantage of economies of scale savings can remain profitable and viable, especially in depopulating regions like much of the Great Plains. In many of these cases, the survivors are likely to be the emerging big-box stores that can supply entire regions, rather than small, locally-owned shops once found in every community that directly compete with big box stores, although some small stores can probably find a niche market that remains underserved by stores like Wal-Mart.

The data used for the above figures—aggregated for types of counties—show some important distinctions between nonmetro and metro counties, and between different types of nonmetro counties. However, the aggregate nature of the data, with all variables summed for a particular type of county, does not say much about the broad geography of retail change. For example, while the aggregated statistics show that nonmetro counties as a group are losing retail establishments/stores, how many of these counties are actually showing declines, or is this result an artifact of a few counties dominating the statistics?

To examine spatial patterns of change at the county level, cross tabulations were completed to determine how many counties of each type are losing or gaining population, retail establishments/stores, and employees. Table 1 shows that of 477 counties, 334 lost population, a pattern of population losses discernable from Figure 1. With respect to the number of counties losing/gaining retail employees and establishments/stores, there is a pattern similar to that found with the aggregate statistics. For example, 69.6% of all counties in the Great Plains gained retail employment, with 30.4% of counties losing employment. With respect to the number of retail establishments/stores, the pattern is almost the exact opposite as that found with employment, with 69.6% of all counties losing establishments/stores. These data clearly show that the restructuring process is widespread throughout the region—that is, more retail employees working in fewer establishments/stores. Additionally, the problem of counties losing retail establishments/stores is most prevalent in nonmetro counties adjacent to metro counties. When comparing the two types of nonmetro nonadjacent counties, we see that the nonmetro counties with urbanized areas (29.5% of counties gaining stores) are faring better than the most remote and rural counties (25.8 % of counties gaining stores), a pattern that is also found in the aggregate data.

Before moving on to a discussion of changes in retail functions, it is worth further discussion to note that changes in the retail sector deviate from those found in other tertiary sector activities (as shown in Figures 2 and 3). While retail employment is climbing, the magnitude of the decline in the number of retail establishments/stores serving customers was greater than the decline in population. A previous study shows this decline in the number of retail establishments/stores is similar to that found in the early 1980s, a time of severe economic distress as farms failed in many parts of the region (Adamchak et al. 1999). However, the 1990s do not represent a time of comparable economic hardship for the region, although population declines are still similar to those in decades past. This contrast with the 1980s also supports the notion that the continued decline in the number of establishments/stores, and where establishments/stores are getting larger, is probably related to restructuring in the retail sector, and conditions in the Great Plains that make the competitive environment very difficult for small, locally-owned retailers. Not only is this pattern visible with aggregated data for various types of nonmetro counties, the results show that the process is widespread geographically.

TABLE 1. CHANGES IN POPULATION, RETAIL EMPLOYMENT AND THE NUMBER OF RETAIL ESTABLISHMENTS / STORES IN GREAT PLAINS COUNTIES, 1988-1999.

		NUMBER OF COUNTIES			PERCENTAGE OF COUNTIES		
	TREND	POP.	RETAIL STORES	RETAIL EMPL.	POP.	RETAIL STORES	RETAIL EMPL.
All Great Plains (n=477)	Losing	334	332	145	70.0	69.6	30.4
	Gaining	143	145	332	30.0	30.4	69.6
Metro (n=40)	Losing	5	2	7	12.5	5.0	17.5
	Gaining	35	38	33	87.5	95.0	82.6
Nonmetro, Adjacent (n=85)............	Losing	54	69	28	63.5	81.2	32.9
	Gaining	31	16	57	36.5	18.8	67.1
Nonmetro, Nonadjacent, Urban (n=139).	Losing	89	98	26	64.0	70.5	18.7
	Gaining	50	41	113	36.0	29.5	81.3
Nonmetro, Nonadjacent, Rural (n=213).	Losing	186	158	89	87.3	74.2	41.8
	Gaining	27	55	124	12.7	25.8	58.2

Source: IMPLAN 2000.

Changes in Retail Functions in the Great Plains

The high rate of loss of retail establishments is an important story in its own right. However, focusing on the number of retail stores lost by itself does not get to the heart of the problem for many rural areas. For instance, the loss of several general merchandise stores in a community may lower quality of life slightly because less variety is available, or because less competition may lead to higher prices. However, if one store is still available, rural customers can still get needed goods without having to travel long distances. This type of problem is really negligible compared with when the last store of an entire retail category disappears. This section focuses primarily on counties losing not just stores, but entire retail functions. For the most remote areas that never had many stores in any single retail category, the loss of entire retail functions really represents the biggest problem for rural residents.

To examine this problem, the retail sector was broken down to the 2 digit SIC level. The sub-sectors analyzed are building materials/garden supplies, general merchandise, food stores, automotive/service stations, apparel, home furnishings, eating/drinking places, and miscellaneous retail (drug stores, liquor stores, etc.). Table 2 shows the number of retail functions lost/gained by nonmetro counties in the Great Plains between 1988 and 1999. For 253 of the 437 nonmetro counties, there was no net change in retail functions—they neither gained nor lost store types—although there may have been some switching as one retail function disappeared and another reentered the county. On the other hand, 151 counties (nearly 35% of all the nonmetro counties) lost at least one type of retail function during that time, with more than 50 counties (11% of all nonmetro counties) losing at least two retail functions. In contrast, only 33 counties gained retail functions (Note: functions in metro counties showed negligible change).

TABLE 2. RETAIL FUNCTIONS LOST/GAINED BY NONMETRO GREAT PLAINS COUNTIES, 1988-1999.

CHANGE IN RETAIL FUNCTIONS	ALL TYPES OF NONMETRO COUNTIES	NONMETRO ADJACENT	NONMETRO, NONADJACENT, URBAN	NONMETRO, NONADJACENT, RURAL
+3	1	0	0	1
+2	3	0	0	3
+1	29	3	4	22
0	253	51	123	79
-1	100	21	10	69
-2	40	7	2	31
-3	11	3	0	8
Total	437	85	139	213

Source: IMPLAN 2000.

Focusing on the various types of nonmetro counties, note the loss of retail functions was greatest in the nonmetro adjacent counties, and in the nonmetro, nonadjacent rural counties. In the last type of county, more than 50% of all counties lost at least one retail function. As found in previous tables, the types of nonmetro counties faring "best" are those that act as urban and retail centers for other smaller and more remote counties, much in the way metro counties pull shoppers from adjacent nonmetro counties. In this case, nonmetro nonadjacent counties with urban centers did much better than the other nonmetro counties, with less than 10% of the counties losing one or more retail functions.

These changes in the types of stores can be examined from a slightly different perspective to provide information on the diversity of retail functions available in Great Plains counties, and how that has changed over time. Table 3 presents data on the number of retail functions in each type of county in 1988 and 1999. In 1988, 267 (61%) of all nonmetro counties had all eight major retail functions. By 1999, the number had dropped to 214 counties, or 49% of all nonmetro counties. Hence, over a short 11-year period, more than 50 counties lost one entire retail function or category. Of the counties that were already missing one retail function in 1988, there was little change in their number 11 years later. However, moving down the table to counties already missing several retail functions to start with, significant increases in the number of counties losing retail functions between 1988 and 1999 are apparent. For counties missing two to four functions, the number increased from 74 counties in 1988 to 127 counties, nearly a 60% increase in a relatively short time span. Finally, for hardest hit areas, those missing six or more functions out of the eight functions, 10 counties fit that category in 1988 while the number grew 14 counties in 1999. Very few counties have no retail, but it appears that retail changes resulted in a loss of 2-4 stores for most counties, with some stabilization for counties with the lower number of retail functions.

Examining Table 3 for changes in various types of nonmetro counties, patterns similar to those found above are apparent. The largest changes in retail functions were in the remote rural counties far from metro areas. In 1988, 81 of these counties had all retail functions, but by 1999, that number had dropped nearly in half, to 48 counties with all retail functions. The losses were much smaller for the nonadjacent counties with urban centers. Finally, nonmetro counties adjacent to metro areas also experienced some significant losses in retail functions, most likely a result of competition from nearby metro areas, as the large and diversified retail bases in the metro counties increased their market areas.

Since retail functions are quickly disappearing in nonmetro areas of the Great Plains, the final step in the analysis entails determining what types of retail functions are dying off. The stores most likely to be present in counties, and to disappear first, are directly related to the population threshold for various types of retail functions, a topic explored in detail decades ago by Brian Berry and a host of other researchers (Berry 1967). The research presented here differs from those studies in that counties are used, but some trends found at the settlement level are still likely to be found at the county level as well. For example, general merchandise

Table 3. Retail Functions in Nonmetro Great Plains Counties, 1988 and 1999

Number of retail functions	1988 All nonmetro counties	1988 Nonmetro adjacent counties	1988 Nonmetro nonadjacent urban counties	1988 Nonmetro nonadjacent rural counties	1999 All nonmetro counties	1999 Nonmetro adjacent counties	1999 Nonmetro nonadjacent urban counties	1999 Nonmetro nonadjacent rural counties
8	267	55	131	81	214	41	125	48
7	78	18	6	54	73	17	8	48
6	44	4	0	40	62	13	4	45
5	19	4	2	13	46	8	2	36
4	11	3	0	8	19	3	0	16
3	8	1	0	7	9	1	0	8
2	5	0	0	5	8	2	0	6
1	3	0	0	3	3	0	0	3
0	2	0	0	2	3	0	0	3
Total	437	85	139	213	437	85	139	213

Source: IMPLAN 2000.

stores have a much larger threshold than eating and drinking places, and are more likely to disappear as population decreases. However, for the most remote and rural nonmetro counties, increasing competition from nearby counties with major retail and urban centers may also reduce the number of retail functions in some of counties, even if there is no change in population. Finally, as retail restructuring continues, some types of retail functions are being consolidated into other types of stores much faster, again leading to a reduction in the number of retail functions in a county.

Table 4 shows which types of retail functions present for 1988 and 1999, and the types of counties in which they were. In broad trends, the most obvious is the large number of nonadjacent rural counties missing three functions. In 1988, 76 counties had no general merchandise stores, 70 had no apparel stores, and 93 had no home furnishings stores. Overall these stores have the highest thresholds, so it makes sense that they are the most likely to not be present in small counties. Over the 11-year time span, there was a significant increase in the number of counties not having these retail functions, in all cases more than a 50% increase. In fact, the number of counties not having apparel stores nearly doubled.

Because of long-term population losses, it seems likely that the disappearance of many functions that took place in the most remote areas represents establishments already operating on the margin. However, there were significant drops in the number of retail functions in counties adjacent to metro counties as well, although the population of these counties remained flat. Clearly, increasing competition from nearby counties is playing a major role in the loss of these functions. The smallest losses of retail functions were in nonadjacent nonmetro counties with urban areas. As the nonadjacent rural counties have lost retail functions, it seems that very rural residents have shifted their shopping to more distant and larger retail/urban centers, although most of these counties have lost population as well. This has provided some stability in retail functions for these nonadjacent nonmetro counties with urban areas. Of course, the mechanism of retail change in these small remote counties may work the other way around as well, with shoppers commuting to distant places in search of a wider variety of goods, resulting in a loss of retail functions in their county of residence.

As for retail restructuring, the data available in Table 4 make it difficult to untangle the effects of restructuring on the loss of retail functions, although some inferences based on the literature can be made (Stone 1995; Vias 2004). Of the retail activities impacted by restructuring process, general merchandise has been the focus

TABLE 4. LOSSES OF SPECIFIC NONMETRO RETAIL FUNCTIONS BY GEOGRAPHY, 1988-1999

2-DIGIT SIC SECTOR	YEAR	# OF COUNTIES MISSING PARTICULAR RETAIL FUNCTIONS: ALL NONMETRO COUNTIES	NONMETRO ADJACENT COUNTIES	NONMETRO NONADJACENT URBAN COUNTIES	NONMETRO NONADJACENT RURAL COUNTIES
Building & Garden Supplies	1988	31	4	2	25
	1999	49	11	2	36
General Merchandise	1988	94	17	1	76
	1999	130	26	1	103
Food Stores	1988	8	1	0	7
	1999	11	0	0	11
Auto Supplies & Service Stations	1988	11	0	1	10
	1999	19	3	0	16
Apparel	1988	86	13	3	70
	1999	161	30	7	124
Home Furnishings	1988	116	18	5	93
	1999	145	23	11	111
Eating & Drinking Places	1988	7	0	0	7
	1999	6	0	0	6
Misc. Retail	1988	21	2	0	19
	1999	28	3	1	24
No. of Counties		437	85	139	213

Source: IMPLAN 2000.

of most scholars. In this category we have Wal-Mart, Target and Kmart (pre-merger with Sears), which have become larger, more efficient, and more geographically dispersed in the last decade (Graff 1998). Not only do they compete against other general merchandise stores in towns, they can also affect similar stores in distant rural areas that cannot match the prices or variety of goods these stores offer (Stone 1995). Furthermore, because of the size and diversity of these stores, they are negatively impacting other types of retail stores as well, especially home furnishings and apparel (Hornbeck 1994). This may be part of the reason for the loss of these retail functions in the nonmetro counties of the Great Plains. On the other hand, losses have been minimal with respect to eating and drinking places, and food stores, categories where stores like Wal-Mart did not compete during the study period.

Overall, the data from the empirical analysis in this section indicate that retail losses in the Great Plains involve more than just the loss of stores, but also a loss in the variety of retail function available in many counties. In fact, more than 50 counties have lost two or more retail functions in an 11-year time span, and many counties have fewer than four retail functions. Additionally, more than a third of all nonmetro counties do not have one or all the following retail functions: general merchandise, apparel and home furnishings.

Conclusion

The goals of this research were to document the changes in retail taking place in the nonmetro areas of the Great Plains in the 1990s and to assess some processes driving these changes. The results show that retail growth and change is much different from that found in other tertiary activities. While retail employment is increasing, even with population losses in most counties, the number of retail stores has significantly declined throughout the region. This is not what is happening in the FIRE and service sectors, which are generally experiencing increases in the number of employees and in the number of establishments. Perhaps even more disturbing is the loss of whole retail functions in many counties in the region, an aspect of retail change that will have an immediate impacts on the everyday life of people in these counties.

The results indicate that some of these losses in retail seem related to population losses, and to increases in commuting to nearby counties with larger urban areas and retail centers. There also is evidence of retail restructuring with respect to the stores remaining in the Great Plains. Overall, with an increase in the number of employees, and a large drop in the number of stores, the scale of most retail activities has dramatically increased. The research completed here and elsewhere suggests that in a world where retail competition is getting ever more intense, an increase in the scale of stores may be needed to reduce costs and remain viable, especially in a declining region such as the Great Plains (Vias 2004).

The long-term impacts of these reductions in retail stores, especially locally-owned "Mom and Pop" shops, are likely to be significant, not only in the Great Plains, but particularly in other rural areas around the United States experiencing similar population trends. However, even in regions experiencing moderate population growth, such as found in many parts of the rural South, this process of big box stores crowding out smaller locally-owned stores is a real problem, and represents a very contentious issue to this day (Neumark et al. 2005)

At a broader scale, rural sociologists have long documented the importance of locally-owned, small enterprises in community health and sustainability (Goldschmidt 1978; Lobao 1990; Stone 1997). As local businesses disappear and are replaced with larger corporate owned stores (or not replaced at all), communities are likely to become more socially stratified, and residents are less likely to be civically engaged. Of course, this is apart from the impacts on central business districts as stores downtown close (Daniels and Keller 1991; Gruidl and Kline 1992; Hornbeck 1994; Shils 1998). This research by rural sociologists has primarily focused on changes in the agriculture sector, but future research can probably make the same kind of links between retail change and the well-being of rural communities.

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