Slow Growth and the Kansas Productivity Puzzle

Peter F. Orazem

Abstract

Over the past quarter century, Kansas has grown at 2.4% per year compared to the U.S. average of 3.1% per year. Kansas has also grown more slowly than the other Plains states (Iowa, Minnesota, Missouri, Nebraska, North Dakota, South Dakota), although the gap is only 0.1% per year. The puzzle is that as a relatively highly educated state, Kansas should have been benefiting from the skill-using technological changes that have been credited with accelerating economic growth for the U.S. as a whole. This study shows that half of the gap in economic growth in Kansas is due to slow employment growth and half to slow growth in labor productivity. The slow labor productivity growth has slowly eroded the competitive position of Kansas firms from one of cost advantage versus other states in 1977 to a competitive disadvantage most recently. The underlying cause for the slow growth is unclear, although there is some evidence supporting two possible causes: low population density and underinvestment in information technologies such as High-speed Internet access.

The Kansas economy has suffered from chronic low economic growth. Whereas the U.S. economy has averaged 3.1% annual growth since 1977, the Kansas economy has grown at only 2.4% per year. While the 0.7% gap in annual growth may seem small, it adds up over time. As shown in Figure 1, average output across all states in the U.S. economy had grown 112% between 1977 and 2001, but Kansas' Gross State Product (GSP) had grown by only 78%.[1] This ranks 37th of the 50 states. Had the Kansas economy grown at the national rate, GSP would be 34% larger or about $30 billion more per year. Clearly if the underlying factors for the relatively slow growth in Kansas could be identified and reversed, the potential returns would be substantial.

Figure 1
Real Gross State Product in the U.S., the Plains States, and Kansas, 1977-2001

Source: Bureau of Economic Analysis data on Gross State Product in constant dollars, normalized to equal 1 in 1977.

which gives us the formulation for conducting the shift-share analysis of the relative importance of employment and labor productivity in explaining growth. Equation (1A) says that changes in GSP (dQ) over time will equal output growth attributable to changes in labor productivity (N*d(Q/N)) plus output growth attributable to changes in employment ((Q/N)*dN). It turns out that both slow employment growth and slow labor productivity growth have contributed to explaining why the Kansas economy has lagged the nation.

Employment in Kansas tracked that of the Plains states very closely, but it lagged the U.S. (Figure 2). Since 1977, employment in Kansas and in the Plains region has grown 47% compared to 59% for the U.S. as a whole. Part of the lag is related to the relatively slow Midwest recovery from the 1982 recession, but the rest is due to faster growth in the U.S. than in the Plains states during the long economic expansion of the 1990s.

Because employment growth in Kansas matched employment growth in the Plains states exactly, the gap in output growth between Kansas and the other Plains states has to be due to slower labor productivity growth in Kansas. That is in fact what happened, as seen in Figure 3. Labor productivity growth in Kansas lagged the other Plains states by about 3 percentage points and lagged the U.S. by 12 percentage points.

Using the differenced form of equation (1), we can show that lagging employment and lagging productivity growth have contributed equally to Kansas' relatively slow growth. Evaluating N and Q/N at their average levels for the 1977-2001 period, output growth in the U.S., the Plains states and Kansas decomposes as

	dQ	=	N*d(Q/N)	+	(Q/N)*dN
U.S.	112%	=	43%	+	69%
Plains	81%	=	29%	+	52%
Kansas	78%	=	26%	+	52%

In Kansas as in the Plains states and the U.S. as a whole, around two-thirds of output growth is attributable to increasing employment and one-third to growth in labor productivity. The 34% faster GSP growth for the U.S. relative to Kansas is due to a 17% advantage in labor productivity growth (43% - 26%) and a 17%

On the other hand, the 2.4% annual output growth in Kansas is virtually identical to the 2.5% average growth in the Plains states as a group. Over the period, economic growth in Kansas lags its closest neighbors by only 3%. That fact leads to a key issue in assessing whether various policy alternatives would improve Kansas' economic performance. It may be that economic growth is dictated by location and is more a function of destiny than design. Alternatively, there may be a common set of factors that are retarding growth across all the Plains states. We will return to this issue at the close of the paper.

Economic Growth and Growth in Employment and Productivity

It is useful to establish how much of the slow growth in Kansas or the Plains states is due to their relatively slow population growth as opposed to differences in productivity growth. We can set up a shift-share evaluation that will allocate output growth to those two components. Letting Q represent GSP and N represent the number of employees in the state, we can decompose GSP into two components, employment (N) and output per worker or labor productivity (Q/N).

(1A) $Q = N*(Q/N)$.
In differenced form, equation (1A) is
(1B) $dQ = N*d(Q/N) + (Q/N)*dN,$

advantage in employment growth (69% - 52%). In contrast, all of the gap in output growth between Kansas and the other Plains states is attributable to Kansas' slower labor productivity growth.

Figure 2
Employment in the U.S., the Plains States, and Kansas, 1977-2001

Employment level (1977 = 1)

Source: Bureau of Economic Analysis data on employment, normalized to equal 1 in 1977.
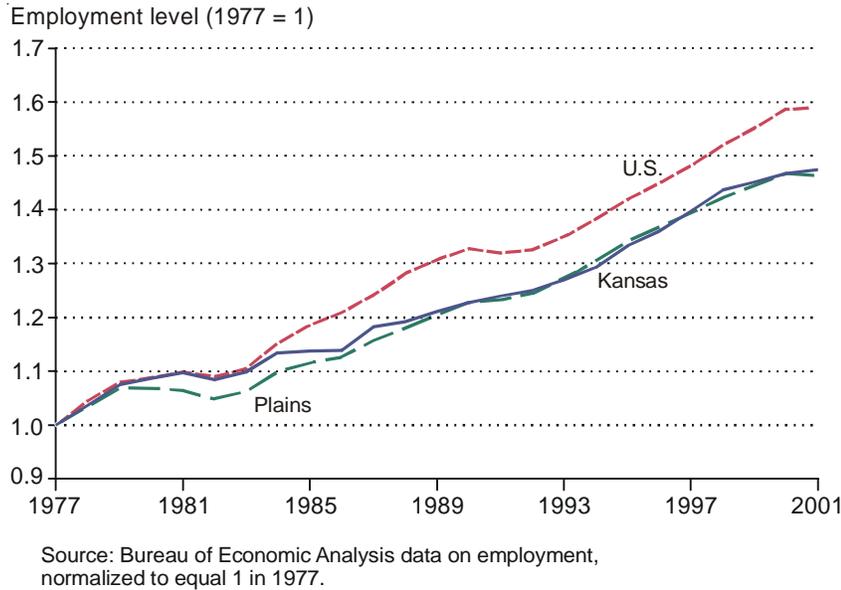
Figure 3
Labor Productivity in the U.S., the Plains States, and Kansas, 1977-2001

Output per worker (1977 = 1)

Source: Bureau of Economic Analysis data on Gross State Product per worker, in constant dollars, normalized to equal 1 in 1977.

Of the two sources of lagging growth, the slow labor productivity growth is of greater concern in assessing the strength of the Kansas economy. Economists have long noted a close relationship between labor productivity and wages, both in theory and in economic data. Firms cannot pay more than the value of what workers produce, and so there should be a close tie between increases in average output per worker and compensation levels.[2] Consequently, slow growth of labor productivity should translate into slow improvement of incomes or living standards in the state. In Kansas, the relationship between the two series is nearly exact (Figure 4) over the 1977-2001 period. The correlation between real compensation and output per worker is 0.98.

However, compensation in Kansas has not lagged the nation, despite Kansas' relatively slow labor productivity growth. Compensation per worker in both Kansas and the U.S. grew 18% between 1977 and 2001.[3] Because of their relatively slow growth in output per worker, Kansas firms could only keep up with wage growth elsewhere by relinquishing a greater share of their profits. This can be seen in Figure 4. The slope of the trend line is greater than one, implying that compensation is rising faster than productivity. In Kansas, compensation has risen $0.75 for every $1 increase in labor productivity. For the U.S. as a whole, compensation has been rising only $0.51 for every dollar increase in productivity. In other words, Kansas labor has been getting more of the return from rising labor productivity over the past 25 years than have workers in other states. As a consequence, Kansas firms have less to fund new investments or growth, and profitability of operating in Kansas relative to other states has been slowly but steadily declining. Ultimately, this threatens the future profitability (and viability) of firms operating in Kansas.

To understand how firms in Kansas have been able to raise compensation faster than labor productivity, we need to compare relative

Figure 4
The Relationship Between Labor Productivity and Compensation in Kansas, 1977-2001
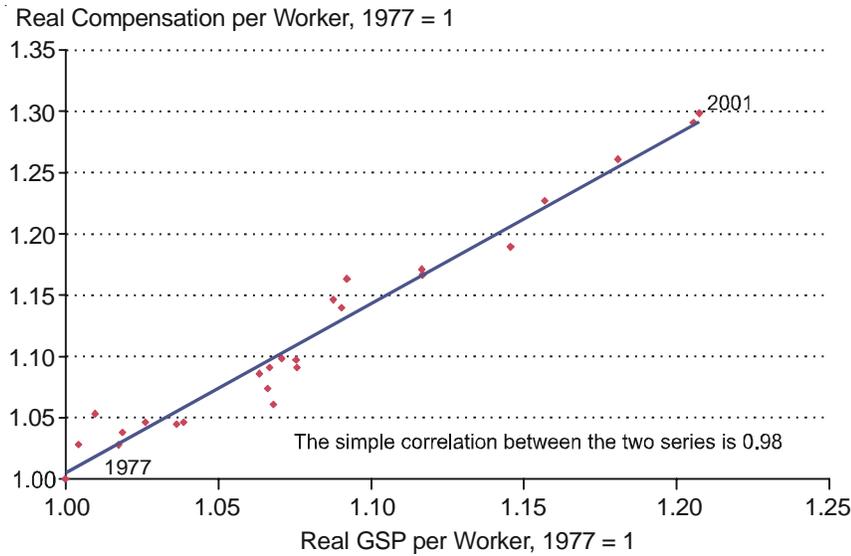
Real Compensation per Worker, 1977 = 1

The simple correlation between the two series is 0.98

Real GSP per Worker, 1977 = 1

Source: Author's computations based on Bureau of Economic Analysis data on real Gross State Product, compensation, and employment, normalized to equal 1 in 1977.

Figure 5
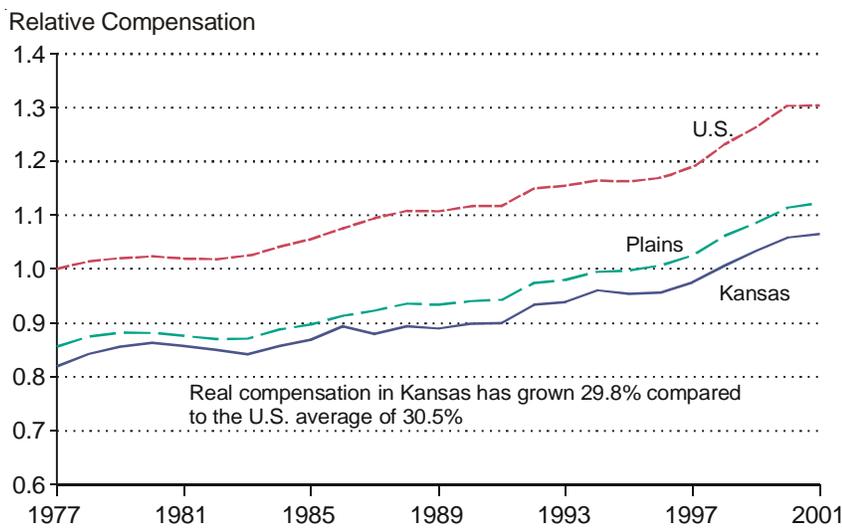**Real Compensation per Employee in the U.S., the Plains States, and Kansas, 1977-2001**

Relative Compensation

Real compensation in Kansas has grown 29.8% compared to the U.S. average of 30.5%

Source: Author's computations based on Bureau of Economic Analysis data on real compensation and employment, normalized so that the U.S. average in 1977 is equal to 1.

compensation levels at the beginning of the period. In 1977, workers in Kansas were paid 82% of the U.S. average (Figure 5). Because pay in Kansas rose at the same rate as pay for the U.S. as a whole, pay in Kansas was still 82% of the national average by 2001. Similarly, pay in Kansas lagged neighboring states by 5% in 1977, and that ratio has not changed in 25 years.

What has changed is what Kansas firms are getting back for maintaining the same relative compensation level. In 1977, Kansas workers were producing at 89% of the U.S. average, but were paid at only 82% of the U.S. average. Firms were getting 7% more output per dollar of compensation. Over the years, that labor cost advantage for Kansas firms has gradually diminished and has now reversed.

That story is shown in Figure 6. Unit labor costs are defined as the compensation cost per dollar of revenue generated. If W is the real wage and N is employment, unit labor cost is $(W*N)/Q$. Alternatively, unit labor cost can be written as $W/(Q/N)$ or the ratio of compensation per worker relative to average output per worker. If W is rising faster than (Q/N), as is true in Kansas, then unit labor costs will be rising. In contrast, if W is rising more slowly than (Q/N), as is true in the U.S. as a whole, than unit labor costs must be falling.

As Figure 6 shows, Kansas firms had a substantial labor cost advantage of about five cents per dollar of revenue generated in 1977. That advantage gradually disappeared by the mid 1990s as costs for the U.S. fell and costs in Kansas rose. Since 1997, Kansas firms have actually had a small labor cost disadvantage as compensation costs per dollar of revenue generated are now higher than the U.S. average. If labor productivity in Kansas does not rise, compensation in Kansas has to fall and/or some firms will lose market share or exit relative to their more cost-effective competitors in other states.

Figure 6
Unit Labor Cost in the U.S. and Kansas, 1977-2001

Source: Author's computations based on Bureau of Economic Analysis data on real Gross State Product, compensation, and employment, normalized to equal 1 in 1977.

atypically well-educated and should have been well positioned to benefit from the technological changes that are believed to have been responsible for the accelerating productivity growth nationwide. Kansas has one of the most educated work-forces, both in comparison to other Plains states and to the nation as a whole. Kansas, at 31%, has an unusually high propor-tion of the population with a college degree compared to the U.S. average of 26.2%. In the Midwest, only Colorado and Minnesota have a higher share of college educated workers. Furthermore, over the period studied, Kansas' ranking in the share of college-educated in the population was rising rapidly, from 24th in the late 1970's to 13th in 2001. In other words, Kansas was experiencing abnormally slow productivity growth over a time period when technological changes should have been favoring the most educated states.

Consequently, it is critically important that we identify the factor or factors that have impeded labor productiv-ity growth in Kansas and to determine whether those factors can be removed.

Possible Explanations for the Kansas Productivity Puzzle

A. It isn't low levels of education

In the two decades following the 1982 recession, labor productivity in the United States grew very ra-pidly. By 2001, the average worker in the United States was producing one-third more than in 1981. Analysts have identified investments in new information technologies as having had a vital role in accelerating productivity growth over that time period.[4] One effect of the increased adoption of those technologies is a shift in labor demand toward more skilled workers. As a consequence, relative wages for more educated workers rose rapidly in the 1980s, and again in the 1990s for the youngest cohorts of educated workers.[5] The widespread adoption of computers and other information processing and sharing technologies has transformed the workplace and raised the productivity and wages on those using these technologies on the job.[6]

If Kansas had a relatively uneducated workforce, one could tie its slow productivity growth to technolo-gies favoring more educated states. In fact, Kansas is

B. It isn't a sectoral or cyclical phenomenon

The slow growth of labor productivity in Kansas could be due to a mix of industries in Kansas that atypically included sectors that were not able to benefit from information technologies. It might also be that Kansas had an atypically large employment share in a few sectors that faced adverse business cycles over the period studied. Neither explanation is consistent with the data.

Table 1 shows the distribution of employment and productivity growth by industry in Kansas compared to the nation as a whole. The productivity gap is not due to a different mix of industries in Kansas relative to the U.S. Kansas' share of employment by broad indus-try classification is similar to that of the U.S. as a whole in 2001. Even for agriculture, the Kansas share of employment is only slightly larger than the U.S. average. That was not true in 1977 when Kansas employment was much more centered on agriculture and less in manufacturing, so the lagging productivity in Kansas is happening as the state's employment distribution is converging toward the national pattern.

The productivity gap is not due to weakness in one or two sectors. Over the 1977-2001 period, Kansas lags behind the U.S. average in annualized labor produc-tivity growth rates in every sector except transportation and utilities and durable manufacturing. Note that even though many of the differences are small in any

Table 1
Employment Share and Output Growth by Industry for Kansas Relative to the U.S.

Industry	Employment Shares by Sector, 2001		Annualized Growth Rates in Output per Worker in Kansas Relative to U.S.		
	Kansas	U.S.	1977-2001	1980-1990	1990-2001
Total Gross State Product	100%	100%	-0.52%	-0.58%	-0.52%
Agriculture, forestry, and fishing	6%	3%	-0.82%	0.65%	-1.35%
Construction	5%	6%	-0.03%	-1.08%	0.80%
Manufacturing	12%	11%	-0.64%	-0.39%	-0.99%
Durable goods	7%	7%	0.00%	-0.29%	-0.11%
Nondurable goods	5%	4%	-1.61%	-0.92%	-2.00%
Transportation and public utilities	6%	5%	0.70%	1.71%	-0.44%
Wholesale trade	4%	4%	-0.29%	-0.67%	0.24%
Retail trade	16%	16%	-0.20%	-0.45%	-0.15%
Finance, insurance, and real estate	7%	8%	-1.79%	-1.65%	-1.42%
Services	27%	32%	-0.53%	-1.24%	-0.12%
Government	16%	14%	-0.34%	-0.40%	-0.15%
State and local	13%	11%	-0.39%	-0.71%	0.11%

Author's computations based on data from the Bureau of Economic Analysis.

one year, they add up to more substantial lags over one or two decades. Some of the productivity lags are quite large, exceeding 1% per year in nondurable manufacturing and financial services. Whatever the source of the lagging productivity growth in Kansas, it appears to be pervasive across most sectors of the Kansas economy.

The productivity gap is also not a temporary phenomenon. For most sectors, productivity lags in the 1980s and again in the 1990s. No broad sector of the Kansas economy has experienced labor productivity growth exceeding national averages in both decades. There is no indication that the productivity lag is just a temporary phenomenon related to sectoral business cycles. The Kansas productivity problem is pervasive across sectors and across time periods.

C. It might be a problem common to all Prairie states

While Kansas lags the nation significantly in employment and labor productivity growth, Figures 1-3 suggest that Kansas' economic performance does not differ greatly from that of her neighbors. Some or all of the Kansas productivity puzzle may be a problem endemic among states in the Midwest: Oklahoma, Nebraska, Missouri, and Iowa also lag the rest of the nation in employment and labor productivity growth. Consequently, some of Kansas puzzle must be found in a common weakness among her neighboring Plains states.

The most likely common problem among these states is their relatively rural nature. Both in the U.S. as a whole and in the Midwest, economic growth has

been strongest in more densely populated regions. The pattern is consistent with evidence that workers in some types of industries are more productive in more densely populated areas due to improved information networks, greater access to customers, and easier proximity to suppliers, although not all metropolitan areas are growing. Figure 7 shows the scatter plot of average incomes by state against the proportion of the state residing in a metropolitan area. The best fitting line through the plot is hardly exact, but it suggests that incomes in Kansas are roughly in line with population density in the state. In fact, average incomes in Kansas are slightly higher than would be expected given Kansas' population density. Table 2 reports the results of a similar exercise comparing per capita incomes in metropolitan areas to their size. Incomes in Kansas City, Lawrence, and Wichita are almost exactly in line with averages at similarly sized cities. If labor productivity is driven by population density, this analysis suggests that Kansas may be doing as well as can be expected. If the Kansas productivity puzzle is due to its location and population density and not to factors that are subject to change, then policies designed to foster economic growth may be doomed to failure.

D. It might be due to weak investment in information technologies

This begs the question as to why labor productivity growth in Kansas has not benefited from its relatively educated workforce. The most likely possibility is that the conditions that led to rising labor productivity in

Figure 7
State Average Per Capita Income by Metropolitan Residence, 2003
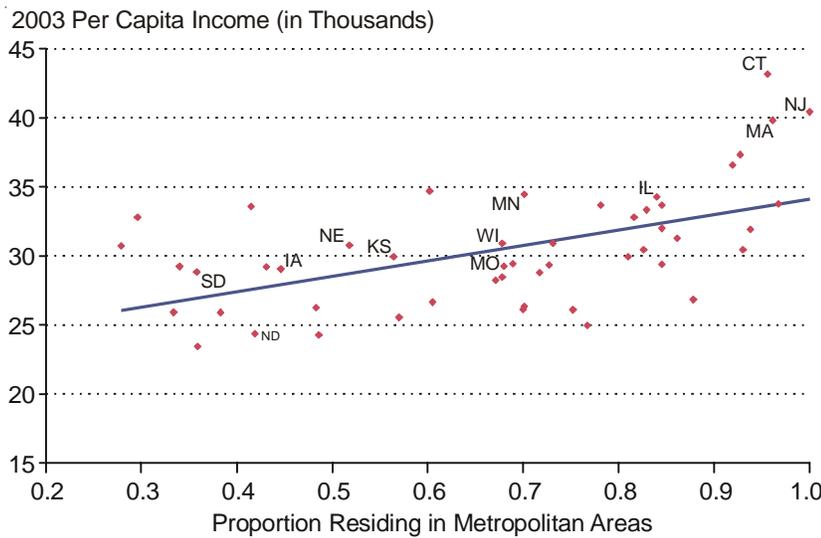
Source: U.S. Census Bureau.

other more educated states were not present in Kansas. In particular, it is possible that Kansas invested less intensively in the information technologies that led to rising returns to skilled labor and faster productivity growth in other states with highly educated workers. Unfortunately, from a research perspective, data on investments in information technologies are not reported at the State level, or even at the industry level outside of manufacturing.

We can investigate this hypothesis using some indirect evidence. One proxy for the level of information technology infrastructure is the availability of high-speed Internet access. This information is reported at the zip code level by the Federal Communications Commission. We can also measure investments in technologies that could potentially be complementary with skilled labor, such as patents issued per

Table 2
2002 Population and Per Capita Income in Midwestern Cities Relative to Comparable Cities in the U.S.

City	Population	2002 Per Capita Income			
		Actual	Predicted[1]	Rank[2]	% of Predicted[3]
Boulder-Longmont, CO	269,814	44,037	30,754	15	143%
Columbia, MO	145,666	29,135	28,957	220	101%
Denver, CO	2,179,240	42,133	37,718	21	112%
Fort Collins-Loveland, CO	251,494	34,215	30,544	89	112%
Fort Smith, AR-OK	273,170	27,075	30,791	278	88%
Greeley, CO	180,926	31,104	29,577	164	105%
Joplin, MO	157,322	26,594	29,175	288	91%
Kansas City, KS-MO	**1,836,038**	**36,731**	**37,091**	**49**	**99%**
Lawrence, KS	**99,962**	**26,621**	**27911**	**286**	**95%**
Lawton, OK	114,996	25,392	28,296	307	90%
Lincoln, NE	266,787	30,614	30,720	177	100%
Oklahoma City, OK	1,095,421	29,850	35,266	200	85%
Omaha, NE	767,041	33,107	34,059	110	97%
Pueblo, CO	141,472	27,763	28,874	264	96%
St. Joseph, MO	122,336	28,507	28,467	244	100%
St. Louis, MO-IL	2,698,687	36,712	38,514	50	95%
Springfield, MO	368,374	27,987	31,704	262	88%
Tulsa, OK	859,532	32,241	34,440	134	94%
Wichita, KS	**571,166**	**33,429**	**33,092**	**104**	**101%**
U.S. Metro Average	763,304	38,423			

[1] Predicted income based on the exponential of the fitted values of a regression of the form $\ln(Y) = \alpha + \beta \ln(P)$, where Y is per capita income in the metropolitan area and P is the population. The regression fits reasonably well ($R2 = .46$). Coefficients (t-statistics) where $\alpha = 9.1$ (113.9) and $\beta = 0.10$ (15.7).
[2] Rank is of 320 Standard Metropolitan Statistical Areas in the United States.
[3] Actual income as a percentage of the predicted.
Source: U.S. Census Bureau.

worker or Research and Development expenditures per worker. Finally, we can approximate investments in physical capital by using information on the value of plant and equipment per worker reported for manufacturing.

The prima facie case for underinvestment in information technology infrastructure is the strongest. Kansas ranks 44th among the states in the proportion of zip codes with at least one high speed Internet provider, suggesting that Kansas was relatively slow to adopt that type of information technology. High speed DSL or cable access is critically important if a firm wants to provide a high quality, convenient web page for remote customers or to use the Internet to communicate efficiently with distant suppliers or customers.[7] Kansas ranks relatively higher on patents per worker (35th) and R&D per worker (22nd).

Table 3 reports the results of a regression analysis of wage growth and labor productivity growth by state between 1997 and 2001 on measures of high-speed Internet access, the proportion of the population with a college degree, and population density. Other regressions included measures of capital per worker in

manufacturing, patents issued per worker, and R&D per worker, but none of those variables proved important in explaining growth in either wages or labor productivity. In addition, their exclusion did not affect the parameter estimates of the other variables, so we report only the simpler specification. Education levels are strongly tied to higher wage growth, but do not have a significant effect on labor productivity. In contrast, Internet access has a strong positive effect on both wage and productivity growth. Interestingly, population density (measured in population per square mile) did not have a significant impact on either wage growth or productivity growth.

We do not want to place too great a weight on this result. We do not have a consistent measure of information technology over the full period and so we cannot test if differential IT access can explain why Kansas lagged in the 1980s as well as the 1990s. In fact, Kansas workers are at or above national averages in terms of computer use and Internet use on the job.[8] Forman, Goldfarb and Greenstein (2003) found that while Internet use can be even more likely in rural than in urban firms, the most recent technologies are used most intensively in urban firms. Table 3 should only be viewed as suggesting that slow adoption of information technologies cannot be rejected as an explanation for why Kansas has had slow productivity growth despite having a relatively highly educated workforce.[9]

Table 3
Determinants of Growth in Wages and Labor Productivity by State, 1997-2001

Variable	Wage Growth	Productivity Growth
Broadband Access	0.07 (2.76)	0.12 (4.37)
Percent with BA degree	0.27 (2.66)	0.09 (0.81)
Population Density	-0.004 (1.99)	-0.002 (1.07)
Constant	-2.08 (0.89)	-3.94 (1.58)
R-square	0.33	0.40
N	50	50

Notes:
Broadband Access is the percentage of zip codes with at least one High- speed Internet provider.
% with BA degree is the proportion of the population with at least a bachelor's degree.
Population density is the population per square mile.
Wage growth is the percentage change in real compensation per workerfrom 1997 to 2001.
Productivity growth is the percentage change in output per worker from 1997 to 2001.
t-statistics in parentheses. Regressions including measures of capital perworker, patents per worker, and R&D per worker yielded similar results.

Conclusion

Kansas' relatively slow economic growth over the past quarter century mimics the experience of other Plains states. These states are characterized by low population density, few large cities, and remoteness from a coast. It is tempting to conclude that population density equates to economic destiny—that the Plains states are doing as well as possible given their locational disadvantages. If true, then it makes no sense to implement new policies to fight the inevitable.

However, some Plains states (Minnesota, South Dakota) have labor productivity growth rates in the upper half of states and other faster growing states (notably Tennessee) do not have obvious advantages over the Plains group. It may be a mistake to concentrate on the small differences with our neighboring states and ignore the huge differences with the rest of the U.S. Exploring how those states have managed to foster labor productivity growth despite their locational disadvantages would be one way to identify whether policies can fight destiny.

This study explored one such factor—investments in information technologies. Economists have demonstrated that the acceleration of labor

productivity growth in the 1980s and 1990s can be attributed to investments in computers, software, and other information processing technologies that have improved communications, record keeping, product design, inventory management, customer service, and numerous other business functions. These technologies are particularly complementary with highly educated work forces such as Kansas has, and yet Kansas appears not to have benefited. While we could not test whether Kansas has had an unusually low level of information technology investments over the past 24 years, we could show that Kansans have atypically low access to broadband Internet services that help to facilitate the use of those technologies. On the other hand, Kansas workers use computers and Internet on the job in numbers comparable to U.S. averages.

As a final point, compared to the other Plains states that have had trouble keeping their college-educated citizens, Kansas has been uniquely able to hold on to educated workers. It is equally important to understand how Kansas has bucked the brain drain that has occurred elsewhere in the Midwest. This is particularly true if slow productivity growth will be making it difficult for Kansas firms to continue to raise pay at the same rate as for the nation as a whole.

Notes

1. Gross State Product has been reported by the Bureau of Economic Analysis since 1977. It represents the sum of income from all sources including the earnings of workers from wages and salaries, earnings of firms and proprietors, and the earnings of government from indirect business taxes.

2. The first empirical validation of the relationship between wages and labor productivity is credited to Cobb and Douglas (1928) and further elucidated in Douglas *Theory of Wages* (1934). In the case of Cobb-Douglas production functions, changes in equilibrium wages and changes in labor productivity will be proportional. Suppose that output is related to inputs according to $Q = AN^a K^B$ where a and B are parameters, K is a measure of capital and Q and N are defined as before. Theory suggests that in equilibrium, the real wage will be set equal to the marginal product, which is $\partial Q / \partial N = a*(Q/N)$, and so real wages will be proportional to measures of output per worker.

3. Real compensation includes all forms of compensation (wages, benefits, and taxes) corrected for inflation.

4. See Jorgenson (2001), Olinor and Sichel (2000), and Dunne et al (2004) for examples of this literature.

5. See Katz and Autor (1999), Card and Lemieux(2001), and Rosenbloom (2002) for evidence on changes in returns to skill by education group and evidence linking those changes to use of computers and other information technologies on the job.

6. Dunne et al (2004) showed that differences in firm investments in computer technologies explain much of the variation in wage growth and labor productivity growth for manufacturing firms, even those in the same industry.

7. Bannister and Shaffer (2004) indicate that wireless or satellite technologies are available in many places that do not have cable or DSL, but those technologies only allow high speed downloading capabilities. Upstream communication is much slower as it typically must be done through dial-up services that are too slow to accommodate a high quality web page.

8. Computer and Internet use on the job by state was computed using data from the October Current Population Survey in 1997 and 2001.

9. The Kansas Technology Enterprise Corporation (1999) present comparative data for Kansas and her neighbors for a broad set of measures that might explain economic growth. Although they did not formally test whether these factors actually explain variation in growth rates, their analysis would be a good starting point to conduct such an analysis.

References

Bannister, Mark and Kevin Shaffer. 2004. "Broadband Deployment in Kansas 2004." *Kansas Policy Review* 26 (Spring): 25-42.

Card, David and Thomas Lemieux. 2001. "Can Falling Supply Explain the Rising Return to College for Younger Men? A Cohort-Based Analysis." *Quarterly Journal of Economics* 116 (May) 2001:705-46.

Cobb, Charles W. and Paul H. Douglas. 1928. "Are there Laws of Production?" *American Economic Review* 18 (March):139-165.

Douglas, Paul H. 1934 *The Theory of Wages* New York: Macmillan.

Dunne, Timothy, Lucia Foster, John Haltiwanger, and Kenneth Troske. 2004. "Wage and Productivity Dispersion in United States Manufacturing: The Role of Computer Investment." *Journal of Labor Economics* 22(April):397-430.

Forman, Chris, Avi Goldfarb and Shane Greenstein. 2003. "How did Location Affect Adoption of the Commercial Internet? Global Village, Urban Density, and Industry Composition." NBER Working Paper 9979 (September).

Jorgenson, Dale W. 2001. "Information Technology and the U.S. Economy." *American Economic Review* 91 (March): 1-32.

Kansas Technology Enterprise Corporation. 1999. *Kansas Innovation Index*.

Katz, Lawrence F. and David H. Autor. 1999. "Changes in the Wage Structure and Earnings Inequality." In Ashenfelter and Card, eds. *Handbook of labor economics. Volume 3A.* Amsterdam: Elsevier Science B.V.

Oliner, Stephen D., and Daniel E. Sichel, 2000. "The Resurgence of Growth in the Late 1990s: Is Information Technology the Story?" *The Journal of Economic Perspectives*. 14 (Autumn):3-22.

Rosenbloom, Joshua L. 2002. "Thinking About the Future: Education and Training Needs for the Workforce of the Future." *Kansas Business & Economic Review* 25 (Spring):1-9.

An Examination of Pull Factor Change in Non-Metro Counties in Kansas: A Study of the Economic Impact of Wal-Mart Construction

Manjula Boyina

'Big boxes' are high volume retail enterprises that are increasing in number as 'convenience shopping' enjoys its hey day in the information age. This category of stores includes general merchandise stores, such as Target, K-Mart, Wal-Mart, etc. as well as those concentrating on a specific category of goods, like Circuit City, Home Depot, and Toys "R" Us. The stores are located nationally and internationally and are increasing in number every year. As of September 2004, Target had a total of 1,107 stores, K-Mart had a total of 1,512 stores, and Wal-Mart had a total of 4,300 stores.

The figures clearly indicate that Wal-Mart is expanding at a greater rate than its competitors. It is also indicative of the effect of its market penetration,[1] also the reason for it being a major headliner. Most of the headlines express the concerns of the communities about the impact that these stores will have,[2] some about its monotonous visual character and others about displacing the character and charm of local retail.

Investigating the real story of how big boxes affect a community is a huge project in itself considering the number of stores and the number of affected communities. One important aspect of these stories is the concern of the impact of the location of a big box retailer not on the host community but on the communities adjacent to it.[3] This article assesses the magnitude of this impact in a number of Kansas's communities by using shifts in the value of the Pull Factor.

Economists, Dr. Kenneth Stone and Dr. David Darling calculate a parameter called 'Pull Factor' which measures how well a community is holding on to and attracting business as compared to losing it to other places. Pull factors are used to assess shifts in the flow of retail sales within the "trade area boundary" established by the host and the non-host communities surrounding it.

In looking into the effect of Wal-Mart on the pull factor, Dr. Kenneth Stone of Iowa State University predicted that the typical trend would show an increase in the values of the pull factors in the host county and a decrease in the values of pull factors in non-host county/counties after the location of a Wal-Mart in the host county. According to Dr. Stone, this increase in values typically occurs within five years of

Pull Factors

$$\text{The Pull Factor} = \frac{\text{County per capita sales tax collections}}{\text{Sate per capital sales tax collections}}$$

(Lall and Darling, 1997)

Pull factor value of 1.00 or greater indicates the community is attracting more business than it is losing and has a postive balance of trade.

Pull factor value of less than 1.00 indicates the community is losing more business than it is capturing.

Pull factors do not account for price inflation, population changes, or changes in the state's economy. The K-State Pull Factor is not adjusted for inflation.

Trade Area Boundary

$$D_{A \text{ to } B} = \frac{\text{Distance between communities A and B}}{1 + \sqrt{\left(\dfrac{\text{Population of larger community}}{\text{Population of smaller community}}\right)}}$$

(Rosenburg, n.d.)

Non-Metro Counties

Rural-Urban Continuum Code: compares like or similar counties.

Numbers of counties from 1 to 10:

- 0,1,2,3: Metropolitan Statistical Areas
- 4: Adjacent to metro county
- 5: Non-adjacent to metro county and with populations more than 20,000
- 6,7: Urban populations below 20,000; non-metro counties
- 8,9,10: Rural with populations less than 2,500

the opening of a new Wal-Mart store. For the host county, an increase in pull-factor values would indicate that the opening of a Wal-Mart is having a positive overall effect on the county. This effect, however, does not reflect shifts in retail sales from existing local retailers to Wal-Mart, which is one of the primary concerns that the people in these communities have.

To test this conjecture, eight counties in the state of Kansas were studied that had a Wal-Mart store built or a Wal-Mart Discount Store converted into a Supercenter over a 22-year period (1980-2002). The pull factors were tracked to note any increase in the values and if the increase corresponded with the location of a Wal-Mart in the same year. In order to isolate the effect of Wal-Mart on a county's pull factor, this article focuses on non-metro counties with urban populations below 20,000, each with a dominant city. The counties

Figure 1
Counties Included in the Study

Counties with RUCC of 7

Counties with RUCC of 6

have a "Rural Urban Continuum Code" of 6 and 7. Counties with an RUCC of "4" are adjacent to a metro county and "5" are non-adjacent to a metro county and have populations more than 20,000. These counties are influenced by the proximity to a metro county and are difficult to isolate for the study.

The counties (dominant city) included in the study are Atchison (Atchison), McPherson (McPherson), Allen (Iola), Barton (Great Bend), Cloud (Concordia), Seward (Liberal), Sherman (Goodland), and Thomas [4] (Colby) as shown in Figure 1. The addition of a Wal-Mart to the dominant city in the selected county yields the pull factor profiles represented in Figures 2-9 that follow. For each county, the year in which a Wal-Mart was added is marked by the star symbol [☆]. A comparison of the trend line of the value/average values of the pull factor of the non-host counties is represented by the line below that of the host county in the respective graph. The larger symbols on each profile represents an eleven-year period after the location of a Wal-Mart in the host county. The non-host counties for each of the counties is shown in Table 1.

Four cases in the study depict the trend of increased pull factor values in the host county along with decreasing pull factor values in non-host counties (Figures 2-5). As noted by Dr. Stone, these figures show an increase in the host county values occurring within five years of the arrival of the Wal-Mart. These host counties include McPherson, Allen, Cloud, and Thomas. It is interesting to note the percent change value of the pull factor between the host county and non-host counties after the addition of the Wal-Mart in the host county. The greater the difference (positive in host and negative in non-host counties/county), the greater the pull factor of the customer base from the trade area boundary. A brief summary of the profiles of each of these counties follows.

Wal-Mart opened in McPherson County in 1987 and its pull factor values started increasing in 1988. The greatest percent difference in the highest pull factor values in McPherson and the lowest values of its non-host counties after the addition of Wal-Mart was 31 percent occurring in 1996. Wal-Mart opened in Allen County in 1988 and its pull factor values started increasing in 1990. The greatest percent difference in the highest pull factor values in Allen County and the lowest values in its non-host county after the addition of Wal-Mart was 27 percent, occurring in 1996. A Wal-

Figure 2
Pull Factors - McPherson and Non-host Counties

McPherson ◆   Rice, Marion ■

Figure 3
Pull Factors - Allen and Non-host Counties

Allen ◆   Woodson ■

Figure 4
Pull Factors - Cloud and Non-host Counties

Cloud ◆   Republic, Jewell, Mitchell ■

Figure 5
Pull Factors - Thomas and Non-host Counties

Thomas ◆   Sheridan, Gove, Logan, Rawlins ■

Figure 6
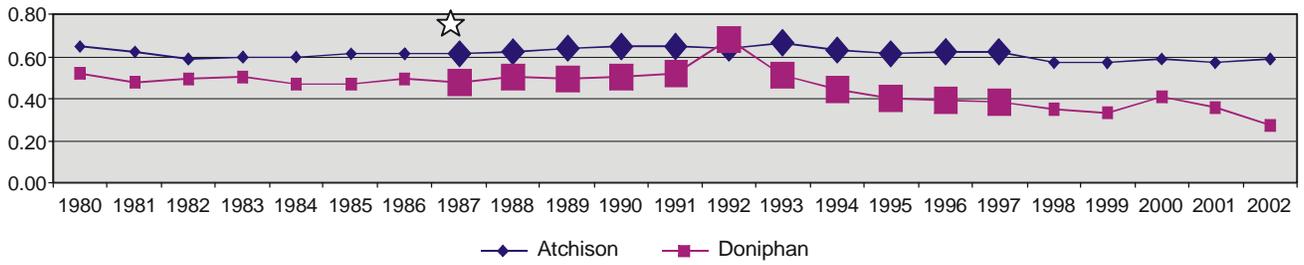**Pull Factors - Atchison and Non-host Counties**

Figure 7
Pull Factors - Barton and Non-host Counties
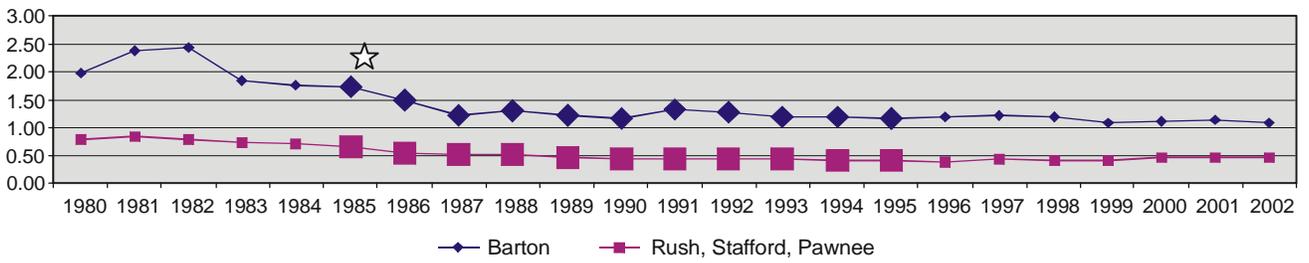

Figure 8
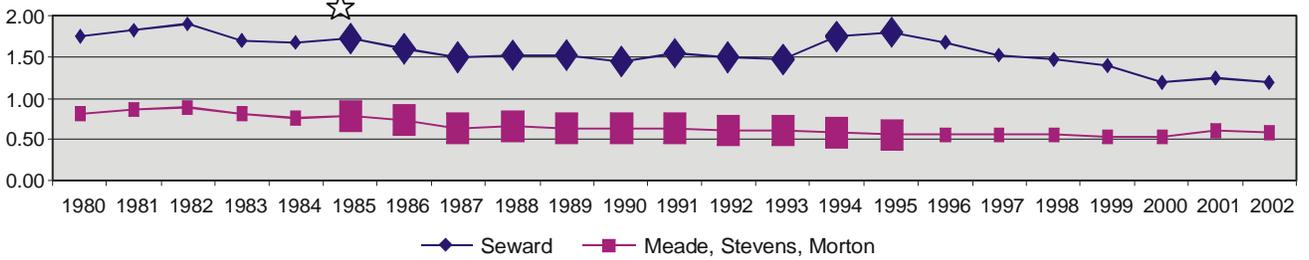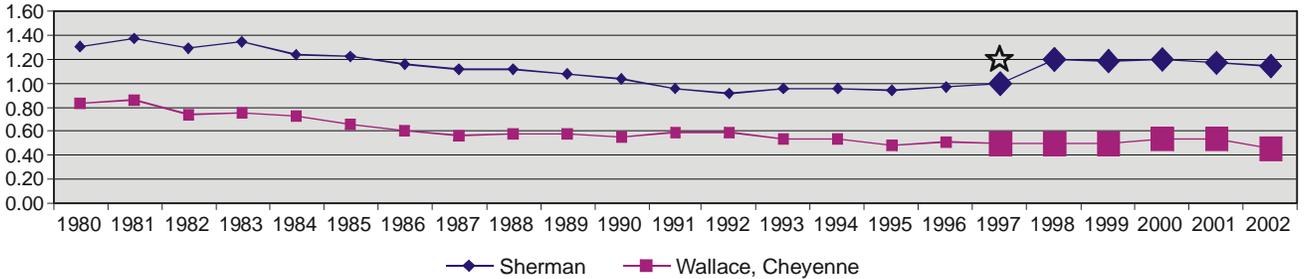**Pull Factors - Seward and Non-host Counties**

Fig 9
Pull Factors - Sherman and Non-host Counties

Mart Supercenter was established in Cloud County in 1989 and the values of the pull factor started increasing the following year, 1990. The greatest percent difference between the highest values of Cloud County and the lowest values of its non-host counties was 17 percent, occurring in 1999. A Wal-Mart opened in Thomas County in 1988 and the values of the pull factors started showing an increase the following year, 1989. The greatest percent difference between the highest pull factor value in a host county—Thomas County—and the lowest pull factor values of its non-host counties was 49 percent, in 1996. Thus, in this case study, Thomas County had the greatest pull of customer base from its trade area.

The pull factor profiles shown in the remaining counties, Atchison, Barton, Seward, and Sherman, did not reflect the predicted profiles of increasing and decreasing pull factor value trends after the addition of Wal-Mart in the host county (Figures 6-9).

Although Atchison County saw the expected increasing trend in the values of the pull factor after the addition of a Wal-Mart in 1987, the non-host county of Doniphan did not show the expected decreasing trend. Doniphan County showed an increasing trend until

1992, when it saw a sudden rise. Both, the host and non-host counties showed a decrease in the values after the Missouri River flood in 1993.

As for Barton County, the Pull Factor values have always been greater than 1.00, which indicates that the county has always been an attractive trade center for the surrounding communities. The pull factor values of Barton County were close to or over 2.00 until 1982, decreasing to about 30 percent until 1987. Wal-Mart was located in the county in the year 1985; two years after the addition of Wal-Mart the decreasing trend of the pull factors regained the strength to remain at a more or less steady value.

Like Barton County, the pull factor of Seward County was around 2 in the years before Wal-Mart was located in the county. The high pull factor can be attributed to the oil boom in the county in the early 1980s. The positive impact of this event, however, decreased in the years immediately before Wal-Mart was located in the county in 1985. This decline ended and was eventually reversed following Wal-Mart's location, while the pull factor in the non-host counties continued to decline after 1985.

Table 1
Summary Results (cases with predicted trend are in bold)

County (RUCC)	Store Type	Wal-Mart Year	Pull Factor	Pull Factor	Non-host Counties Included	Highest Pull Factor % Difference between Host Counties and Non-host Counties after the Addition of Wal-Mart
			Host	Average of Non-host		
Atchison (6)	Discount Store	1987	Increase	Stable, Incease, Decrease	Doniphan	No decrease in non-host county values
McPherson (6)	**Discount Store**	**1987**	**Increase**	**Decrease**	**Rice and Marion**	**31% (1996)**
Allen (7)	**Discount Store**	**1988**	**Increase**	**Decrease**	**Woodson**	**27% (1996)**
Barton (7)	Discount Store	1989	Decrease	Decrease	Rush, Stafford, and Pawnee	No increase in host county values
Cloud (7)	**Super-center**	**1989**	**Increase**	**Decrease**	**Republic, Jewell, and Mitchell**	**17% (1999)**
Seward (7)	Super-center	1985	Decrease	Decrease	Meade, Stevens, and Morton	No increase in host county values
Sherman (7)	Super-center	1997	Increase	Increase	Wallace and Cheyenne	No decrease in non-host county values
Thomas (7)	**Discount Store**	**1988**	**Increase**	**Decrease**	**Sheridan, Gove, Logan, and Rawlins**	**49% (1996)**

The situation of Sherman County is unique because, although there is a positive change in the values of the host county, there is also an increase in the pull factor value of the non-host counties during the period. The greatest difference between the increasing percent change in the host county and decreasing percent change in non-host counties is 21 percent. The values of the pull factor in non-host counties increased for three years before they started decreasing, after the addition of the Wal-Mart Supercenter in 1997.

The pull factor value profiles in the host and non-host counties discussed above, were affected by other variables that could be studied separately. However, the addition of Wal-Mart did stabilize the pull factor values of previously declining values for the counties that did not show the predicted profile. Considering this, Wal-Mart did have a positive effect on pull-factors values in all host counties included in this study, although non-host counties in all four cases remained fairly stable or increased.

A summary of the results for the eight counties is found in Table 1.

On balance, a new Wal-Mart store appears to attract new business to the host county, and in many cases it draws business from surrounding counties. But it is clear that a variety of other factors also influence how the establishment of a new Wal-Mart affects the local economy. Market studies will be useful in planning for stronger economic development policies and in determining if Wal-Mart alone will make the difference. Analysis of the pull factor trend lines of the region will lead to a better understanding of the regional market, especially in assessing the reasons for leakage from communities. This leakage can be countered by creating better development strategies and policies that create a business environment attractive to an outside customer base.

One important implication is the need to form regional-level planning committees that assess the strengths and weaknesses of each community in the region and develop plans that are mutually beneficial. State policy makers should take into consideration how they can encourage such community cooperation. The smaller markets could encourage businesses they need the most and create niches for customers in the trade region. This mutual exchange of customers would be market collaboration, not competition, and would keep customers from all the communities in the region.

Notes

1. Typically, a common practice of Wal-Mart in succeeding with its strategy is "peripheral location" (Ortega, 1998). These peripheral areas are rezoned for the location and land use issues like these need to be sorted out in the best interests of the local government officials and the planners.

2. The "ignorance of the profound planning impacts big box stores have on the visual character of the community" (Duerksen, Blanchard, 1998). "An oversupply exists when there is more than one acre of commercial land for every 150 residents" (Perry, Noonan, 2001). "Instead of profits staying in town to be reinvested locally, the money is hauled off to Bentonville, either to be used as capital for conquering yet another town or simply to be stashed in the family vaults" (Hightower, 2002).

3. The mass merchandiser "… clearly leads to market saturation, drives retail prices lower and gives consumers many more choices. The immediate consequence is that it is more difficult for small businesses to operate profitably" (Stone, 1995).

4. Non-host counties include Sheridan, Gove, Logan, Rawlins and Decatur.

References

Duerksen, Chris and Blanchard, Robert (1998). *Belling the box: Planning for Large Scale Retail Stores.* Proceedings of the 1998 National Planning Conference.

Hightower, Jim (2002). *Wal-Mart: The world's biggest corporation.* The Independent. Retrieved from http://www.corpwatch.org/news/PND.jsp?articleid=6848 on October 07, 2003.

Lall, Pooran and Darling, L. David (1997). *City Pull Factors for Fiscal Year 1997 and the strength of Retail Trade in Kansas Communities.* K-Sate Research and Extension Department of Agricultural Economics.

Ortega, Bob (1998*). In Sam we trust: the untold story of Sam Walton and how Wal-Mart is devouring America.* New York : Times Business.

Perry, L. Theodis and Noonan, T. James (2001). *Managing Maryland's Growth: Models and Guidelines" Big-Box" Retail Development.* Maryland Department of Planning. Retrieved from http://www.mdp. state.md.us/mgs/bigbox/bigbox_v3.pdf on October 07, 2003.

Rosenberg, Matt (n.d). *Reilly's Law of Retail Gravitation.* Retrieved from http://geography.about.com/cs/citiesurbangeo/a/aa041403a.htm on September 03, 2003.

Stone, E. Kenneth (1995). *Competing with the Retail Giants.* Wiley, John and Sons, Incorporated.

How Heavy? Assessing the Burden of Taxation in Kansas

Joshua L. Rosenbloom

Nobody likes to pay taxes. As a result pledging to cut taxes is always a popular issue for those running for public office. At the same time, taxes fund essential federal, state, and local services. Finding programs to cut to balance revenue reductions is often difficult. With the opening of the 2005 state legislative session the issue of taxes will once again be central to many legislative discussions.

A number of legislators have already suggested that Kansas adopt a tax cutting plan—called a Taxpayers Bill of Rights—that is modeled on one adopted in Colorado in 1992. In its simplest form, the plan would limit state revenue growth to the rate of inflation plus the rate of population growth. Any increase in revenues above these amounts would be refunded to state taxpayers (Lawrence Journal World, 6 December 2004, p.1). One advocate of the plan, Representative Brenda Landwehr of Wichita asserts that "The Legislature had not been able to maintain control over spending, so the people should."

There are legitimate differences of opinion about what level of services the state should provide in areas like highways, higher education, social services, etc., but any discussion of these choices must begin with the facts. To get a sense of how heavy the burden of taxation in Kansas is currently, and how it has changed it helps to step back and get the big picture.

The Federal government's Bureau of Economic Analysis collects and publishes statistics that help to put the burden of taxation in Kansas in perspective.[1] Using these data it is possible to: (1) trace changes in the level of state taxes in Kansas relative to personal income, which is the best available measure of Kansans' ability to pay, and (2) compare the level of taxes in Kansas with other states. As will become clear, Kansas legislators have not been spending out of control. The burden of supporting state government in Kansas is roughly in the middle of all U.S. states, and as a share of Kansans' income the cost of supporting their state government has fallen slightly over the past decade.

The Tax Burden in Kansas

In 2003 state tax revenues per capita in Kansas amounted to $1,838.62.[2] Table 1 provides a breakdown of the sources of these revenues. By far the largest portion of total state tax collections comes from two sources: sales taxes (which account for 37.7 percent of

Table 1
**Sources of State Tax Revenue in Kansas, 2003**

Item	Amount	Per Capita
Population (July 1, 2003, released December 18, 2003)	2,724	X
Total taxes	5,008,411	1,838.62
Property taxes	54,030	19.83
Sales and gross receipts	2,664,383	978.11
General sales and gross receipts	1,888,543	693.30
Selective sales taxes	775,840	284.82
Alcoholic beverages	83,982	30.83
Amusements	675	0.25
Insurance premiums	121,317	44.54
Motor fuels	411,458	151.05
Pari-mutuels	3,875	1.42
Public utilities	758	0.28
Tobacco products	133,760	49.10
Other selective sales	20,015	7.35
Licenses	256,372	94.12
Alcoholic beverages	2,404	0.88
Amusements	211	0.08
Corporation	41,619	15.28
Hunting and fishing	16,784	6.16
Motor vehicle	155,959	57.25
Motor vehicle operators	10,081	3.70
Public utility	4,361	1.60
Occupation and business, NEC	22,190	8.15
Other licenses	2,763	1.01
Other taxes	2,033,626	746.56
Individual income	1,776,884	652.31
Corporation net income	124,519	45.71
Death and gift	46,952	17.24
Documentary and stock transfer	X	X
Severance	85,271	31.30
Other	X	X

Source: U.S. Census Bureau; http://www.census.gov/govs/www/statetax.html

state general fund revenue) and income taxes (35.5 percent of revenue). Most of the remaining revenue is generated by selective sales taxes such as those on alcoholic beverages and insurance premiums.

In addition to the taxes collected by the State, Kansans also pay taxes to county and city governments, school districts, and possibly other local taxing bodies. Information about these tax collections is more limited,

Figure 1
State Personal Income and Tax Revenues per Capita, 1993-2003

Source: U.S. Census Bureau; http://www.census.gov/govs/www/statetax.html
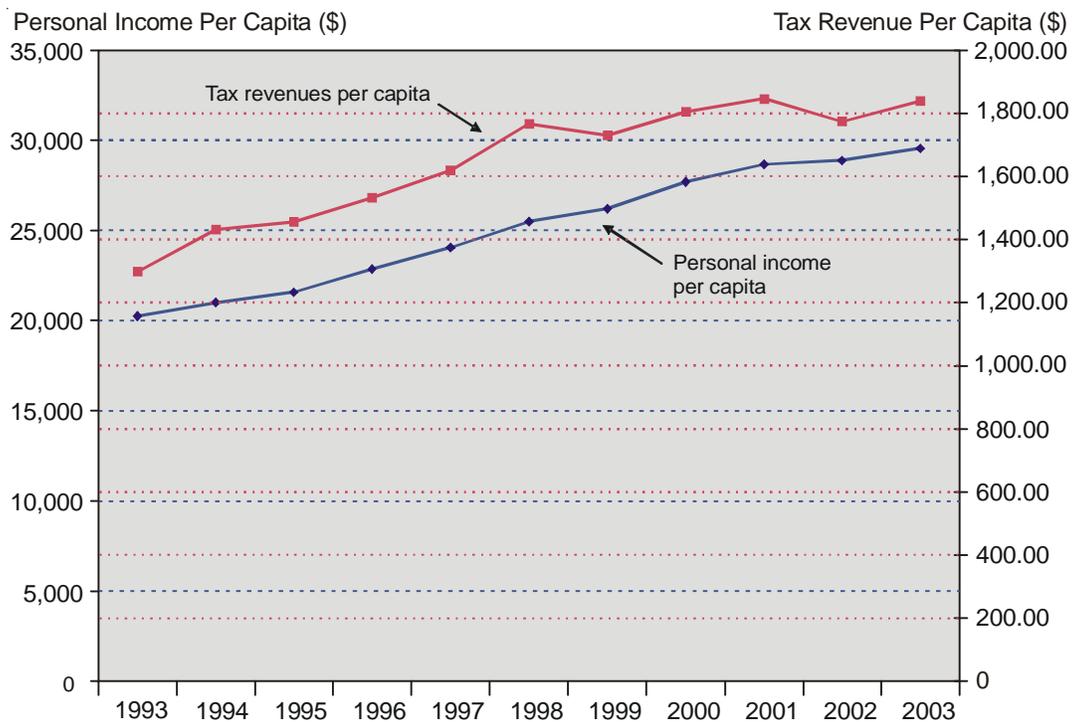
and the most recent data available from the Federal government refer to 2002. In that year, local governments in Kansas collected an average of $1,167.63 per capita in taxes, and the combined state and local tax burden was $2,940.63 per capita.[3] Nearly four-fifths of local taxes were in the form of property taxes, while sales taxes provided essentially all of the remaining local tax revenues.

The Cost of Government in Kansas

One way to put state tax collections in perspective is to compare them to taxpayers' personal income. This measure provides a sense of what portion of Kansans' spending goes to pay for government services. In 2003, state personal income per capita in Kansas was $29,545, so state taxes were equivalent to 6.2 percent of personal income in the state. In 2002, when both state and local tax collections can be analyzed their combined burden was equivalent to 10.2 percent of personal income.[4]

Have tax revenues been growing out of control in Kansas? At first glance it might appear that the answer

to this question is yes. Advocates of cutting taxes are likely to point to the fact that the nominal (current price) level of taxes per person has increased by 41 percent in the ten years since 1993. Of course, they would acknowledge that part of this increase reflects inflation. Since 1993 the GDP deflator, a broad measure of price inflation, has increased by 20 percent, so the real increase in tax revenues is 18 percent.

Despite the increase in tax revenues over the past decade, the burden of taxation as a share of income has actually fallen. As Figure 1 shows, state tax revenues per capita have grown roughly in parallel with personal income over the last decade. A closer look reveals that during the early 1990s taxes were rising faster than income, increasing from 6.4 percent of income in 1993 to a peak of 6.9 percent of income in 1998. But since 1998 income has grown faster than tax revenues. As Figure 2 illustrates, by 2002 the relative tax burden had fallen to its lowest level in any year considered (6.1 percent of income). Despite a small increase in 2003, tax revenues remained relatively low by historical standards.
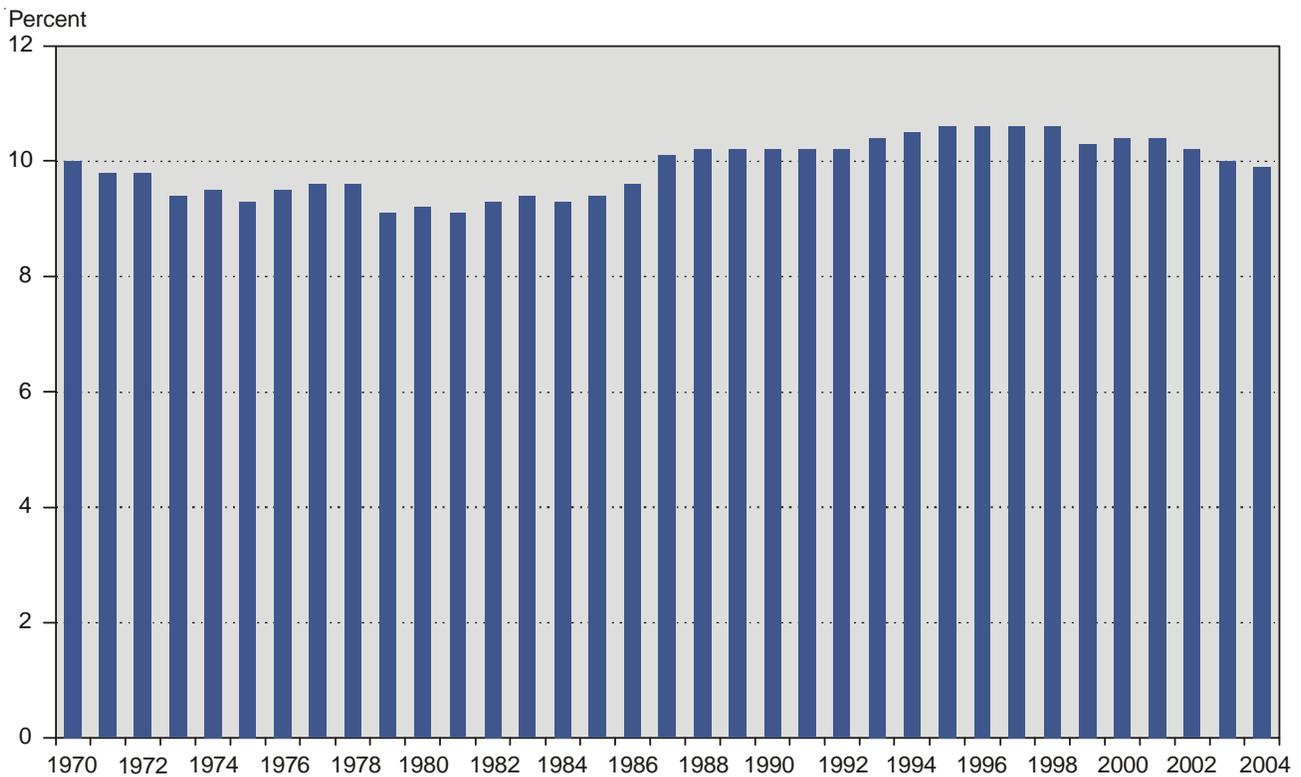
Much the same conclusion emerges from an analysis of the combined state and local tax burden. Figure 3

Figure 2
Kansas State Tax Revenues as a Percentage of Personal Income, 1993-2003
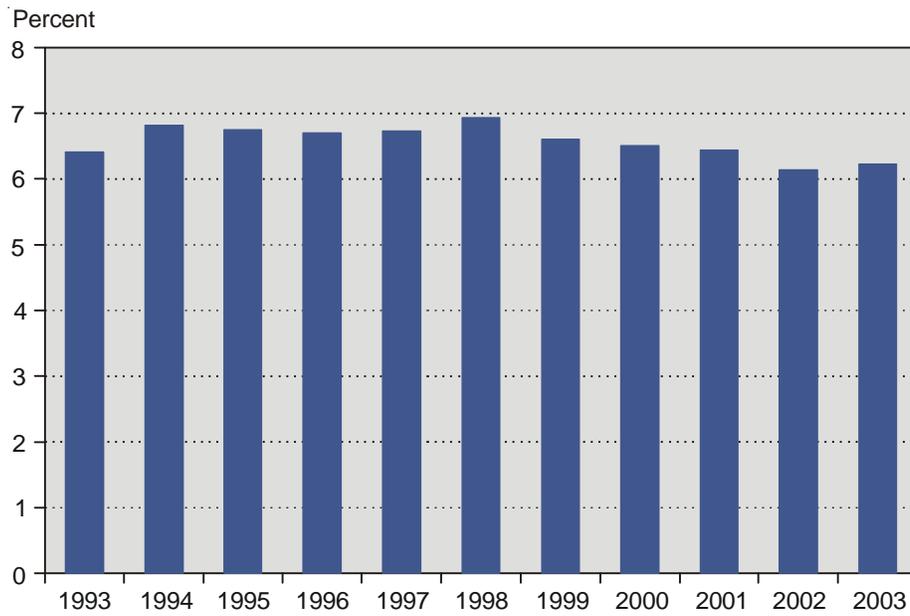
Percent

Figure 3
Kansas State and Local Tax Collections as a Percentage of Personal Income, 1970-2004

Percent

Table 2
State Taxes per Capita, 2003

Rank	State	Amount	Rank	State	Amount
	United States	1,883.56			
1	Hawaii	2,837.70	**26**	**Kansas**	**1,838.62**
2	Connecticut	2,730.02	27	Indiana	1,810.27
3	Minnesota	2,649.48	28	Ohio	1,805.84
4	Delaware	2,601.60	29	Virginia	1,755.91
5	Vermont	2,518.11	30	Illinois	1,750.30
6	Wyoming	2,429.45	31	Iowa	1,718.56
7	Massachusetts	2,426.68	32	Mississippi	1,717.25
8	New Jersey	2,307.97	33	Idaho	1,716.21
9	Michigan	2,256.76	34	Oklahoma	1,681.63
10	California	2,231.94	35	Utah	1,680.44
11	Wisconsin	2,226.76	36	Louisiana	1,656.48
12	Washington	2,113.88	37	Alaska	1,647.64
13	New York	2,113.51	38	Montana	1,619.85
14	Rhode Island	2,097.26	39	Oregon	1,601.60
15	Maine	2,065.29	40	Florida	1,580.90
16	Kentucky	2,021.56	41	Arizona	1,557.38
17	Maryland	1,993.16	42	Georgia	1,544.23
18	West Virginia	1,983.08	43	South Carolina	1,531.98
19	Nebraska	1,925.07	44	New Hampshire	1,521.13
20	New Mexico	1,923.82	45	Missouri	1,512.52
21	Arkansas	1,887.58	46	Tennessee	1,508.32
22	North Carolina	1,885.17	47	Colorado	1,458.18
23	Pennsylvania	1,875.23	48	Alabama	1,425.54
24	North Dakota	1,857.61	49	South Dakota	1,321.84
25	Nevada	1,842.54	50	Texas	1,315.55

Source: The Tax Foundation, *http//www.taxfoundation.org/kansas/statelocal-ks.html*

shows estimates of state and local tax collections as a percentage of personal income from 1970 to the present. Over the past 34 years state and local taxes have fluctuated in a narrow range relative to personal income with no apparent trend. Relative to income, the combined state and local tax burden reached its lowest level (9.1%) between 1979 and 1981. From this trough it rose to a peak (10.6%) in the mid-1990s (10.6%) before falling back toward its current level.

Comparing Kansas and the Nation

Comparing taxes with income helps to provide a measure of the cost of government relative to Kansans' ability to pay. But it is also useful to compare the tax burden in Kansas with that in other states. This helps to evaluate whether the cost of government in Kansas is in line with experience in other states. Every state must fund essentially the same package of services and activities. If Kansas tax revenues were substantially out of line with national norms it would be a basis for concern. In fact, however, Kansas is very much average in its tax burden.

Table 2 shows per capita tax revenues for all 50 states along with the U.S. average. The states are listed in declining order of per capita tax burden. Kansas is right in the middle, ranking 26th out of 50 states, and its per capita tax revenues are within $50 of the U.S. average.[5] What is striking about this table is actually how similar state tax burdens are across states. Indeed half of all states impose per capita taxes that are within $250 of Kansas' taxes. This similarity suggests that any

radical cuts in state expenditures would require more than simply increasing the efficiency of state government. Rather they would require substantially rethinking what services and activities Kansans expect the state to provide.

Conclusion

There will always be those who advocate reducing the size of state government, and reasonable people can disagree about what services state government should provide to its citizens. But advocates of reducing the size of government should concentrate on explaining what areas of spending they would advocate reducing. Contrary to the assertions of those who wish to reduce state taxes, there has been no irresponsible growth in state spending in Kansas. Rather state and local government spending in Kansas appears very much in line with current practices in other states, and the burden of government has changed very little in the past decade.

Notes

1. These data are available on the internet at http://www.bea.doc.gov/bea/regional/spi/

2. It should be noted that this figure excludes property taxes collected by counties and transferred to the state as part of the funding mechanism for public schools.

3. Local and state tax collections based on the 2002 census of governments are available from Census Bureau, at http://www.census.gov/govs/statetax/0217ksstax.html

4. Although Federal statistics are not available for more recent years, a private organization, the Tax Foundation, collects and analyzes data on combined state and local taxation. Their estimates of the amount of state and local taxes in Kansas for every year from 1970 through 2004 are available from their website http://www.taxfoundation.org/kansas/statelocal-ks.html. According to this source combined state and local taxes in Kansas were equivalent to 10 percent of personal income in the state in 2003, and 9.9 percent of personal income in 2004.

5. Adding local taxes does not greatly alter the situation. The average state and local tax burden across all states was 10 percent in 2004, just slightly greater than Kansas' figure of 9.9 percent, and Kansas ranked 22 in terms of combined state and local tax burden as a percent of income (The Tax Foundation http://www.taxfoundation.org/statelocal04.html).