Perspectives on the Kansas Economy and Dynamic Budget Scoring

Discussion before the Senate Commerce Committee

Art Hall, Executive Director
Center for Applied Economics, KU School of Business
March 7, 2013

Two Unifying Themes:

Density

To a significant degree, the patterns of population change in the Great Plains might be best characterized as a long-run economic adjustment rather than decline. A key pattern in the Plains is one of urbanization (or regionalization). Many of the regionalization patterns a in the Plains became apparent by the 1930s.

Productivity growth tends to happen in geographic areas characterized by greater population density. Productivity growth is the ultimate goal of economic development. Productivity growth is the key driver of higher per-worker payroll.

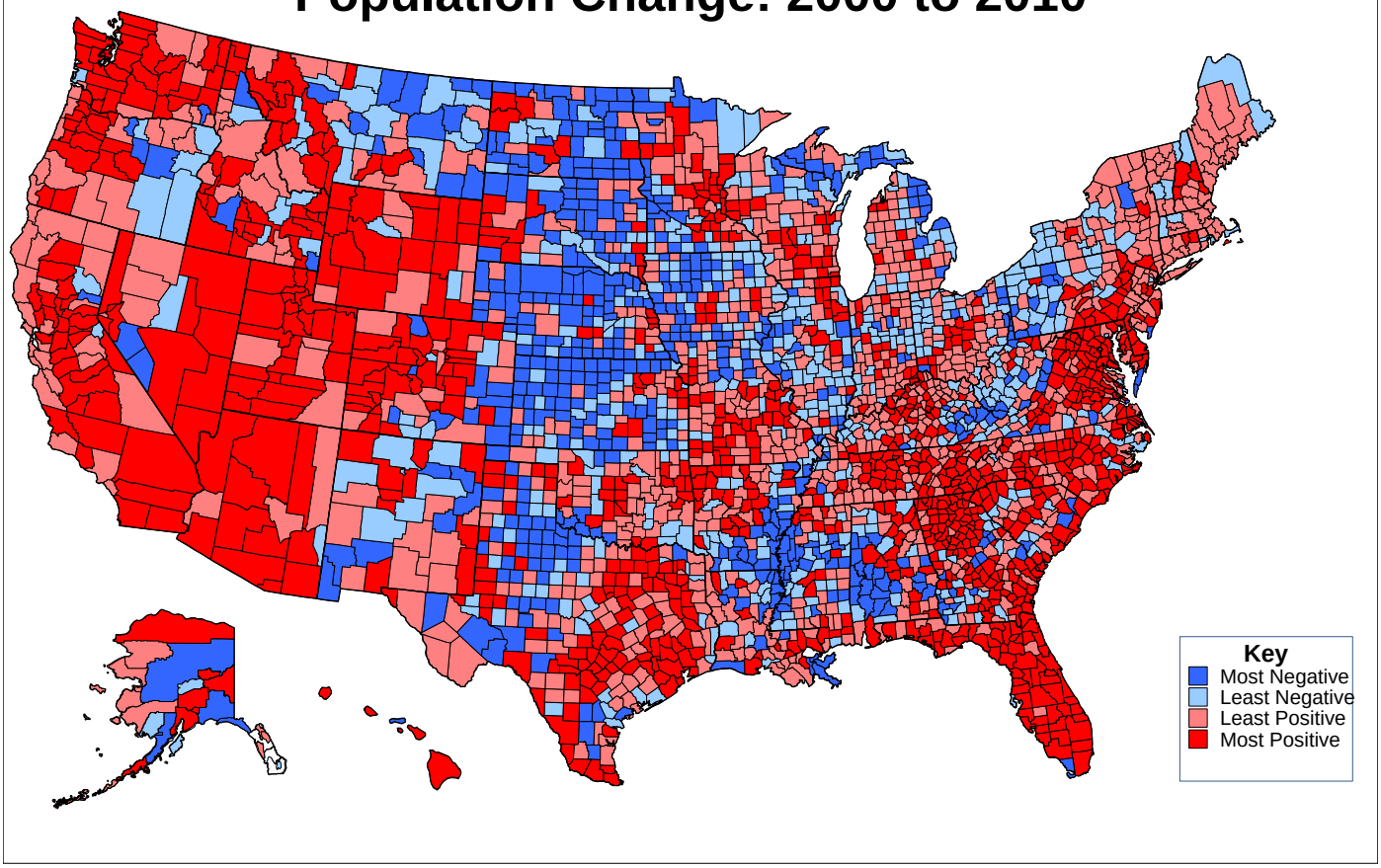
Dynamism

Dynamism, in an economic development context, implies that growth and change go together as multi-causal elements of the development process. Productivity enhancement must take place on the frontlines of individual businesses through risky investments and a complex process of trial and error. That process creates both successes and failures. The failure, though unfortunate, represent a vital part of the evolutionary process related to sustainable economic development (and productivity growth).

Dynamism as a policy goal means creating the conditions necessary to induce as much commercial experimentation as possible on Kansas soil. The policy challenge centers on establishing a business environment that induces business births and expansions without bias related to the size or type of business. Every business matters. The portfolio of policies should work well across all Kansas's regional economies, regardless of their development stage. In brief, state-level policies should:

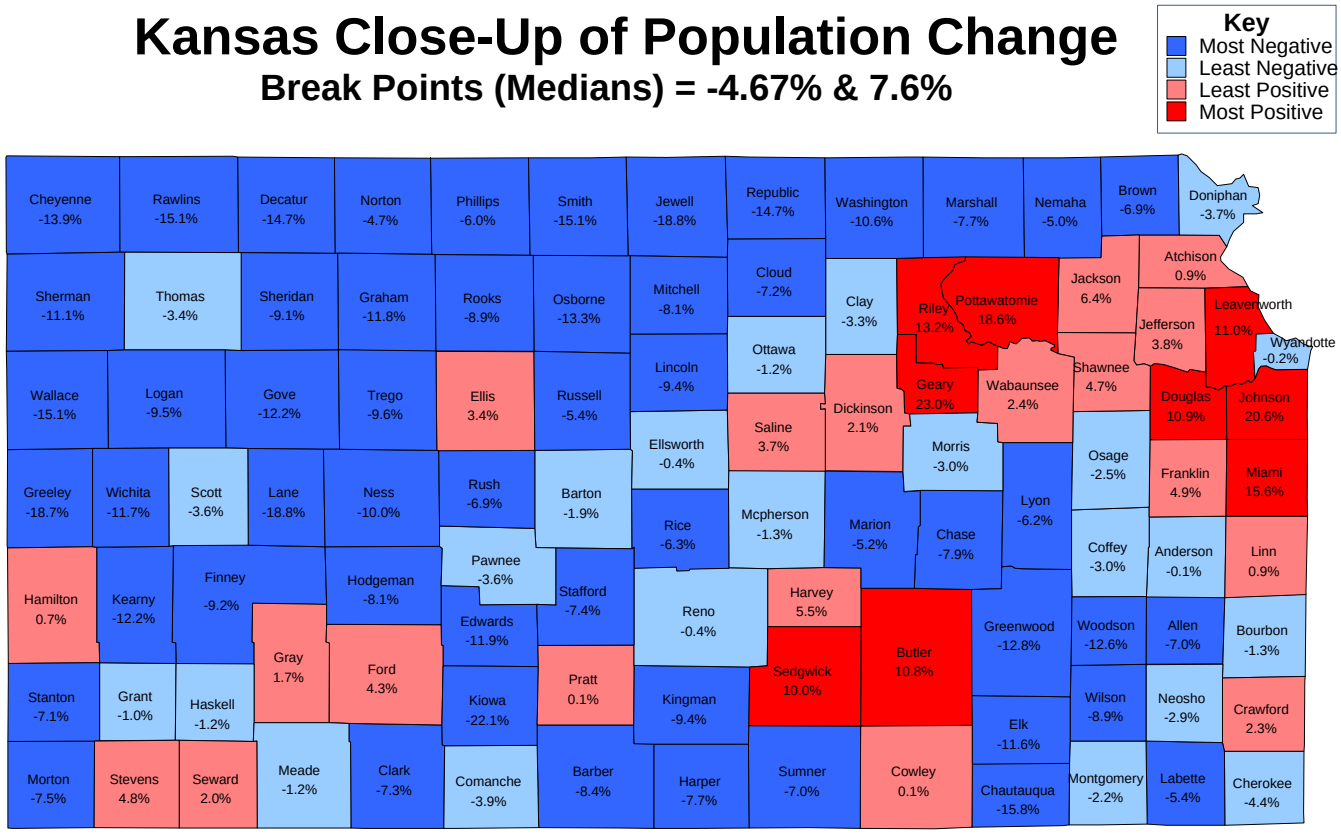
1) Treat all business and investment opportunities equally.
2) Facilitate business development in the unique context of the regional economy.
3) Embrace rather than impede the continuing patterns of structural change.

Population Change: 2000 to 2010

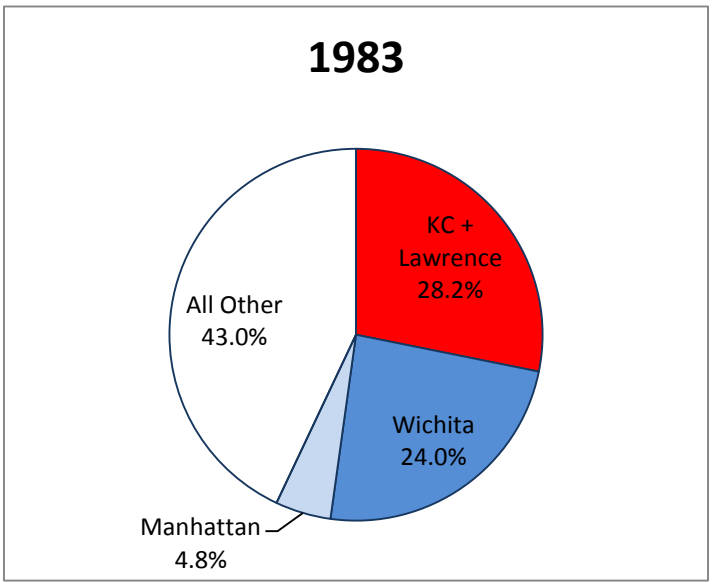


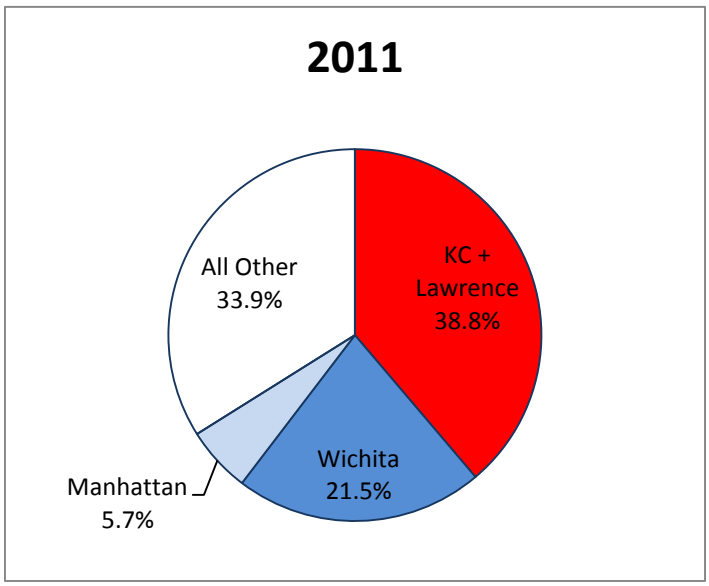
Kansas Close-Up of Population Change

Break Points (Medians) = -4.67% & 7.6%

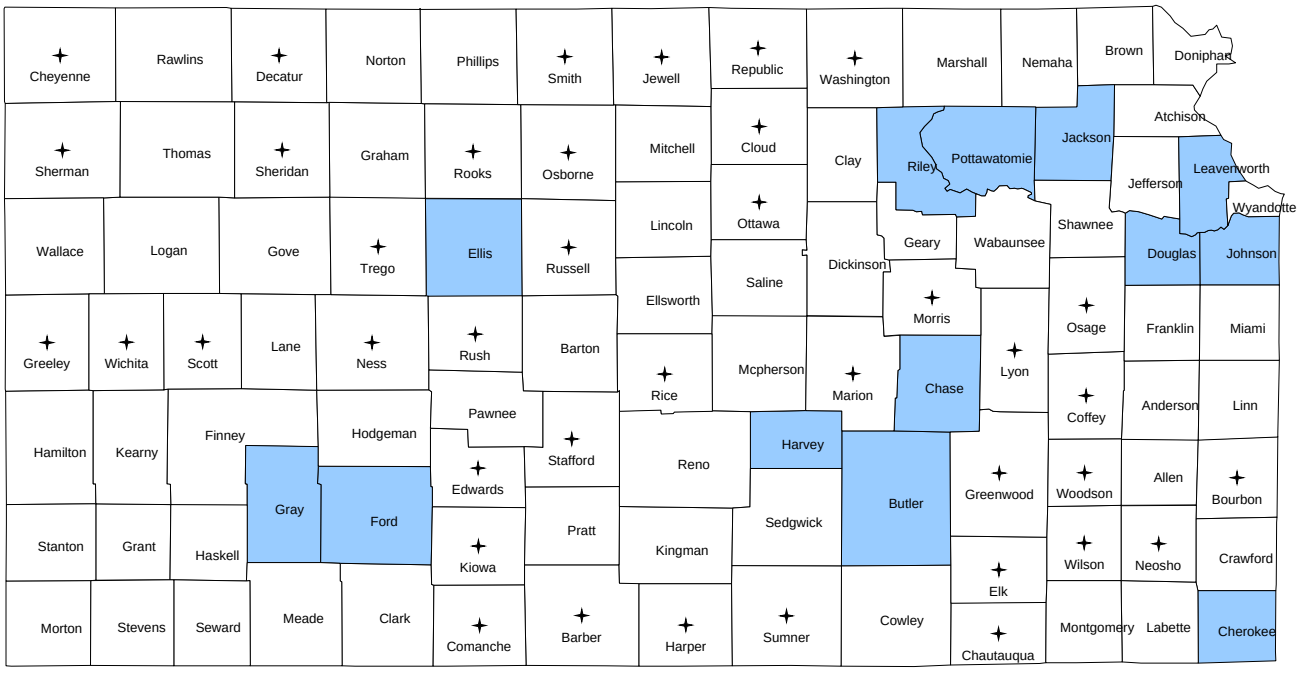


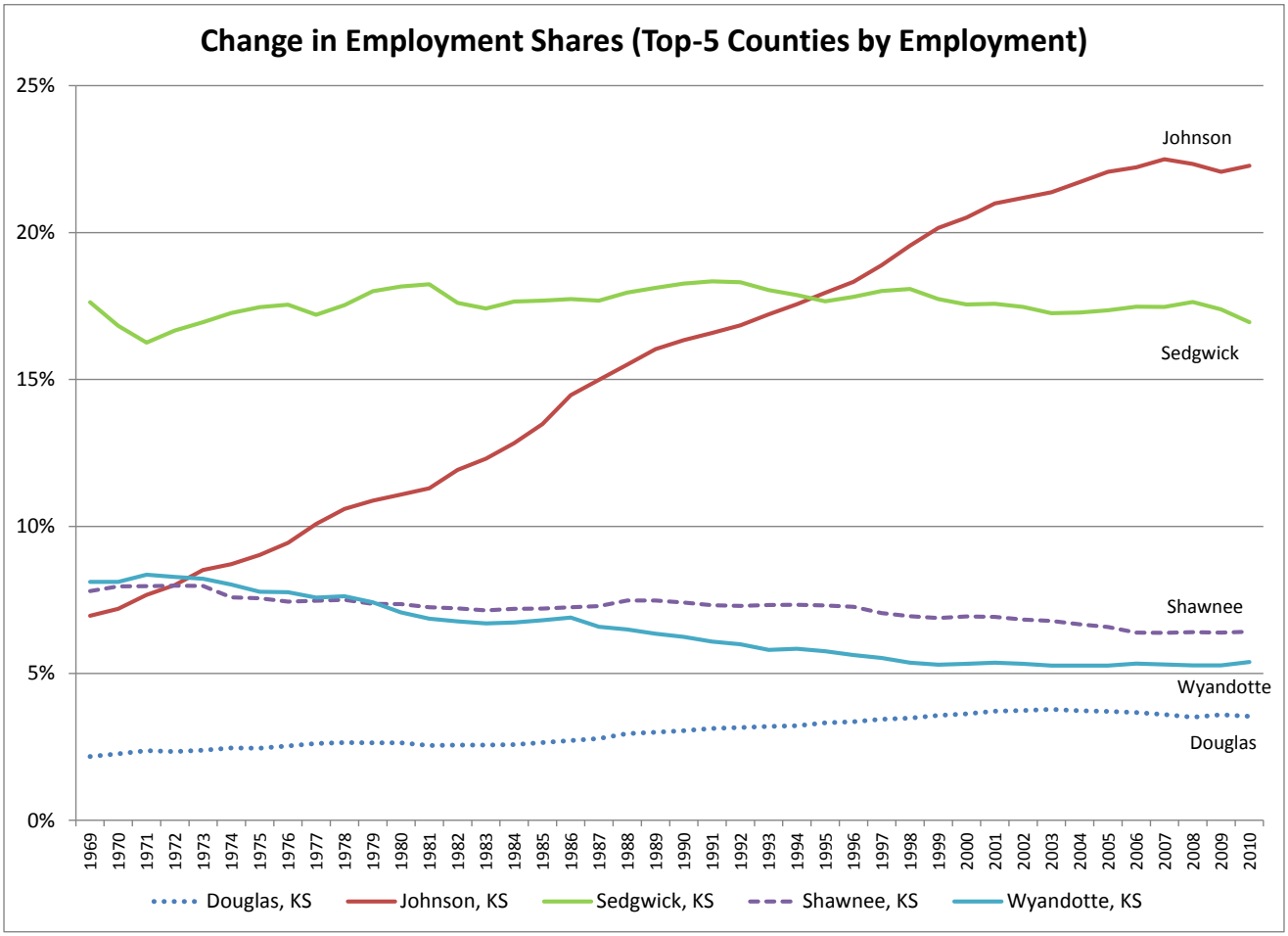
Shifting Geographic Share of Statewide Payroll

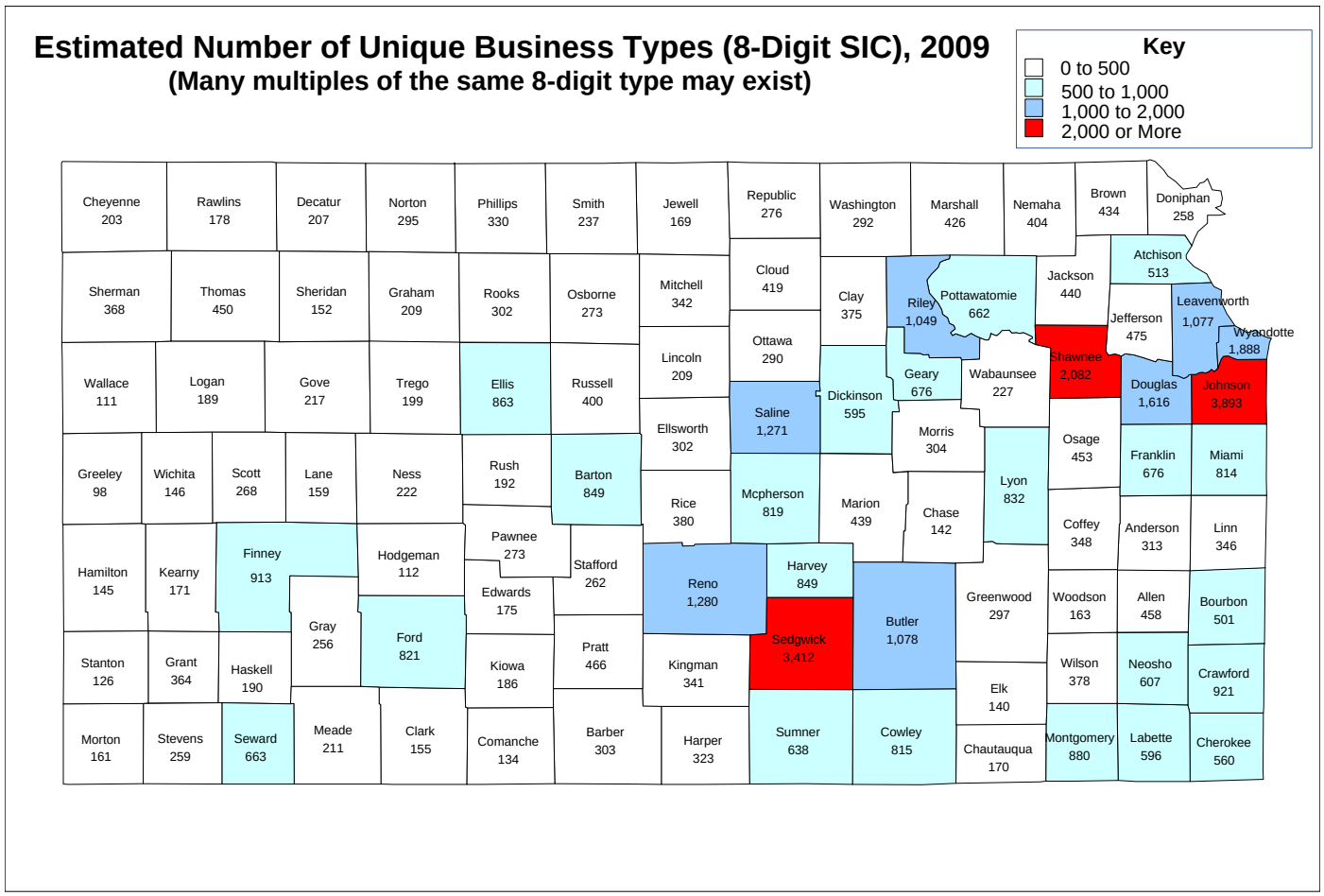




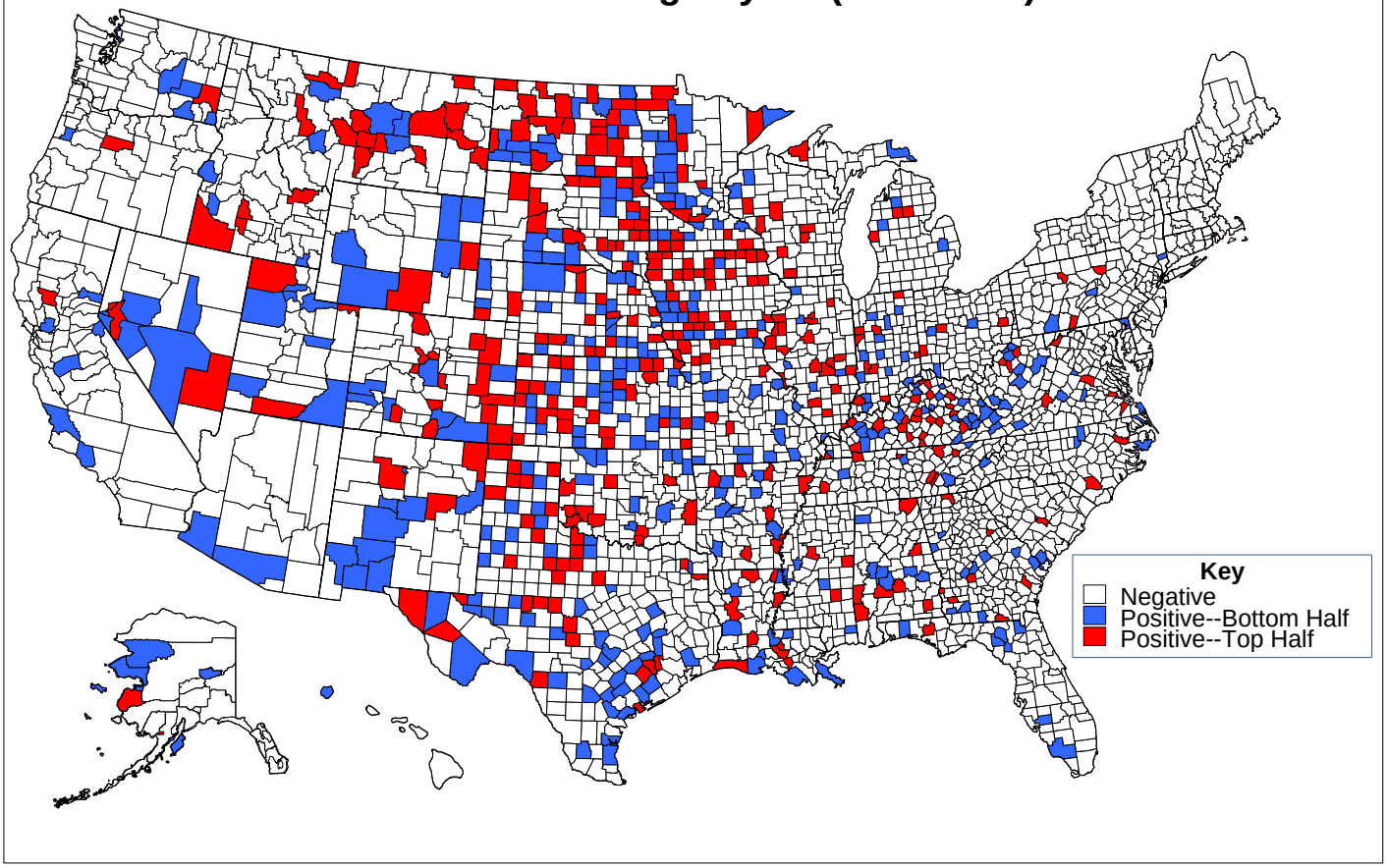
Change in Statewide Shares of Jobs, 1983-2011



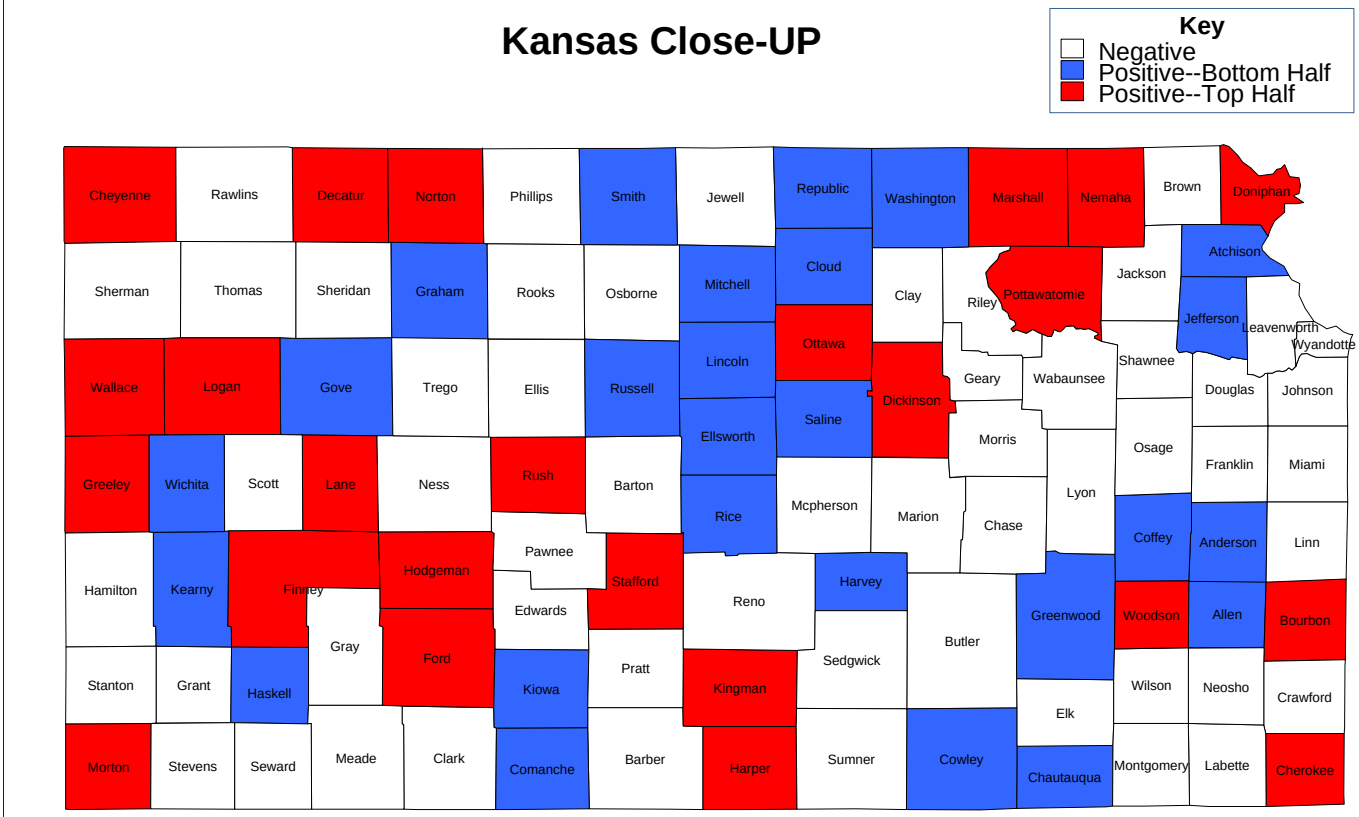

Change in Employment Shares (Top-5 Counties by Employment)
25%
20%
15%
10%
5%
0%
Johnson
Sedgwick
Shawnee
Wyandotte
Douglas
1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010
Douglas, KS
Johnson, KS
Sedgwick, KS
Shawnee, KS
Wyandotte, KS

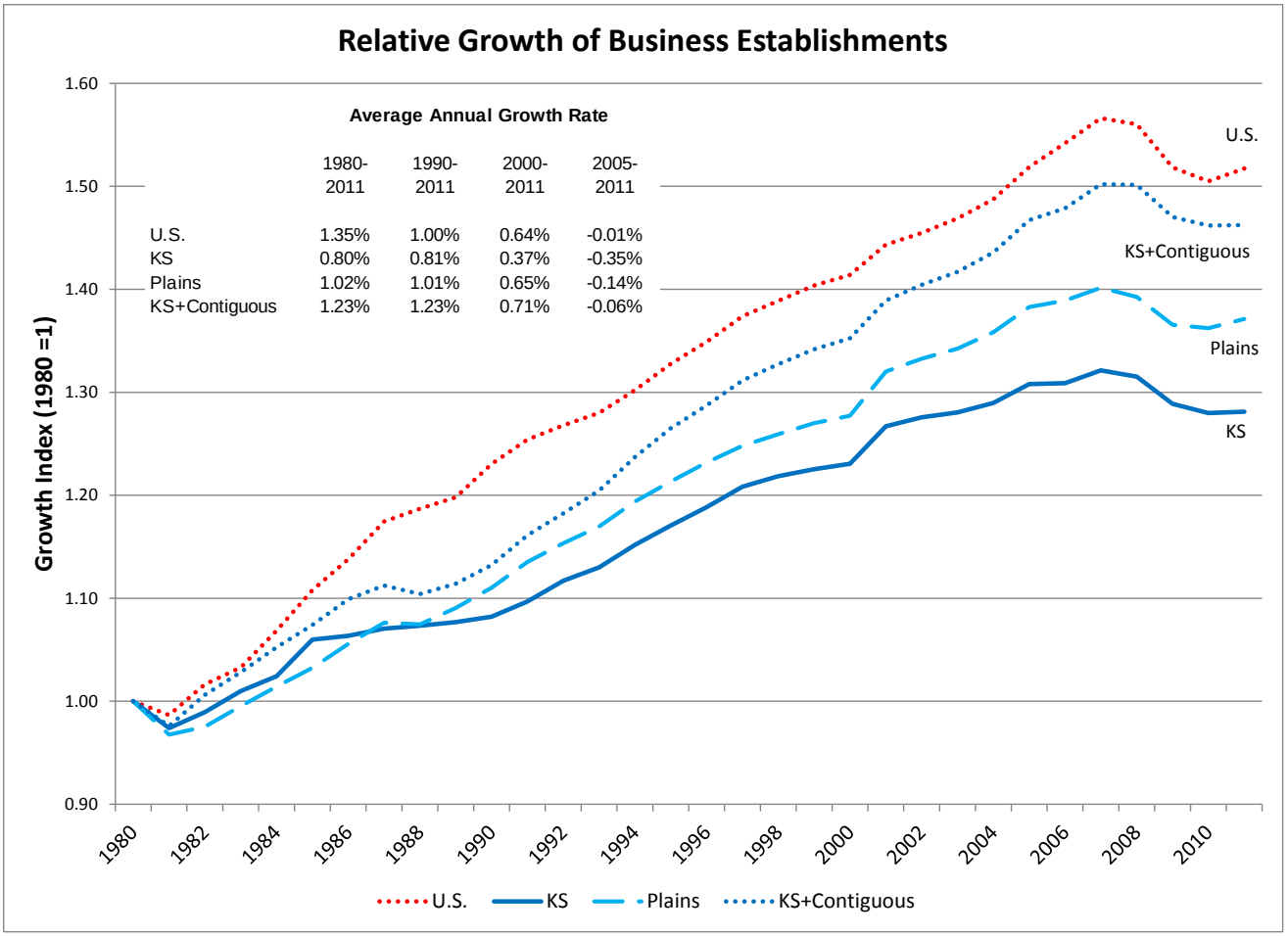

Estimated Number of Unique Business Types (8-Digit SIC), 2009
(Many multiples of the same 8-digit type may exist)
Key
0 to 500
500 to 1,000
1,000 to 2,000
2,000 or More
Cheyenne 203
Rawlins 178
Decatur 207
Norton 295
Phillips 330
Smith 237
Jewell 169
Republic 276
Washington 292
Marshall 426
Nemaha 404
Brown 434
Doniphan 258
Sherman 368
Thomas 450
Sheridan 152
Graham 209
Rooks 302
Osborne 273
Mitchell 342
Cloud 419
Clay 375
Riley 1,049
Pottawatomie 662
Jackson 440
Atchison 513
Jefferson 475
Leavenworth 1,077
Wyandotte 1,888
Wallace 111
Logan 189
Gove 217
Trego 199
Ellis 863
Russell 400
Lincoln 209
Ottawa 290
Dickinson 595
Geary 676
Wabaunsee 227
Shawnee 2,082
Douglas 1,616
Johnson 3,893
Greeley 98
Wichita 146
Scott 268
Lane 159
Ness 222
Rush 192
Barton 849
Ellsworth 302
Saline 1,271
Mcpherson 819
Marion 439
Morris 304
Chase 142
Lyon 832
Osage 453
Franklin 676
Miami 814
Hamilton 145
Kearny 171
Finney 913
Hodgeman 112
Pawnee 273
Stafford 262
Rice 380
Reno 1,280
Harvey 849
Butler 1,078
Greenwood 297
Coffey 348
Anderson 313
Linn 346
Gray 256
Ford 821
Edwards 175
Sedgwick 3,412
Woodson 163
Allen 458
Bourbon 501
Stanton 126
Grant 364
Haskell 190
Kiowa 186
Pratt 466
Kingman 341
Elk 140
Wilson 378
Neosho 607
Crawford 921
Morton 161
Stevens 259
Seward 663
Meade 211
Clark 155
Comanche 134
Barber 303
Harper 323
Sumner 638
Cowley 815
Chautauqua 170
Montgomery 880
Labette 596
Cherokee 560

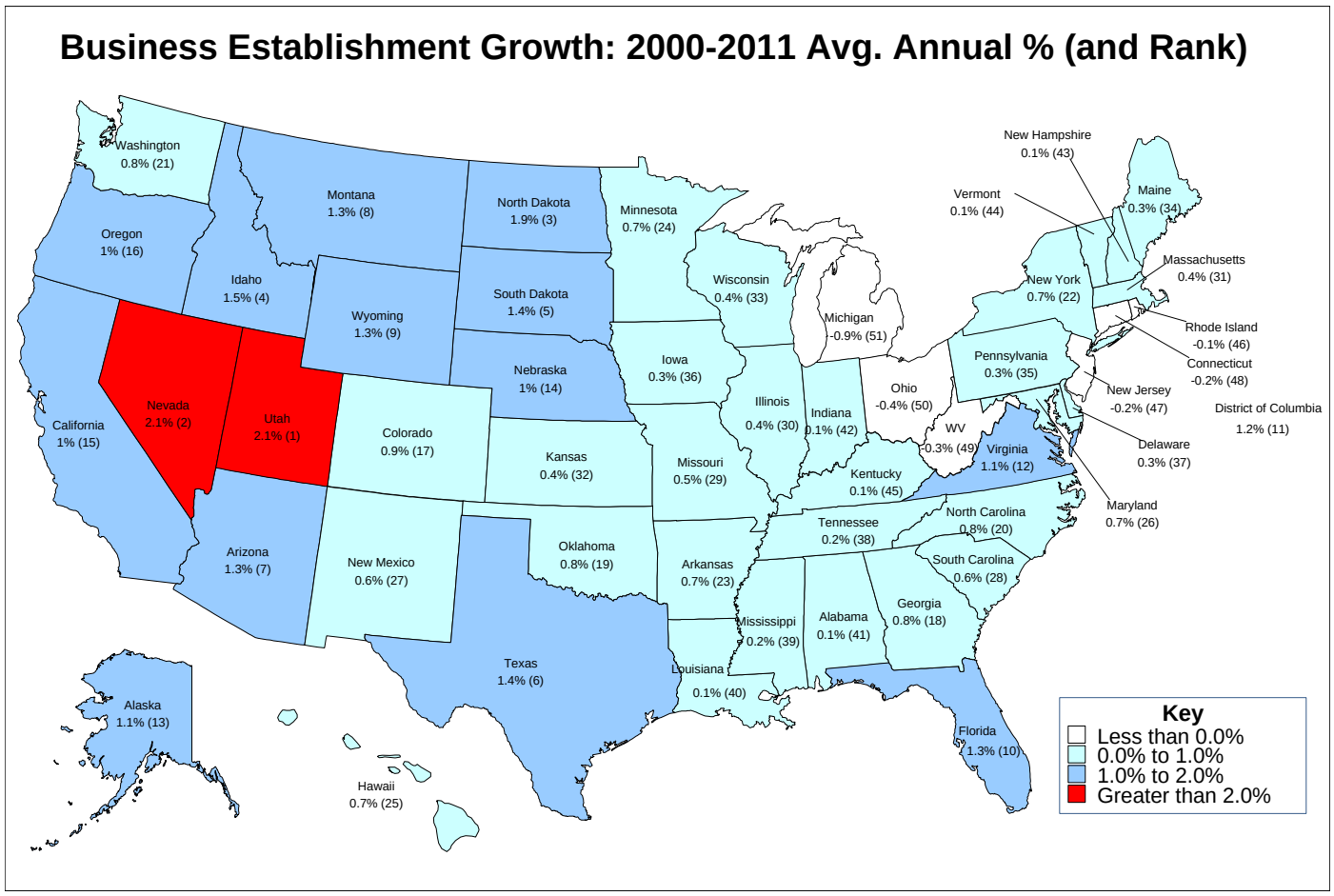
Growth of Manufacturing Payroll (1977-2007)

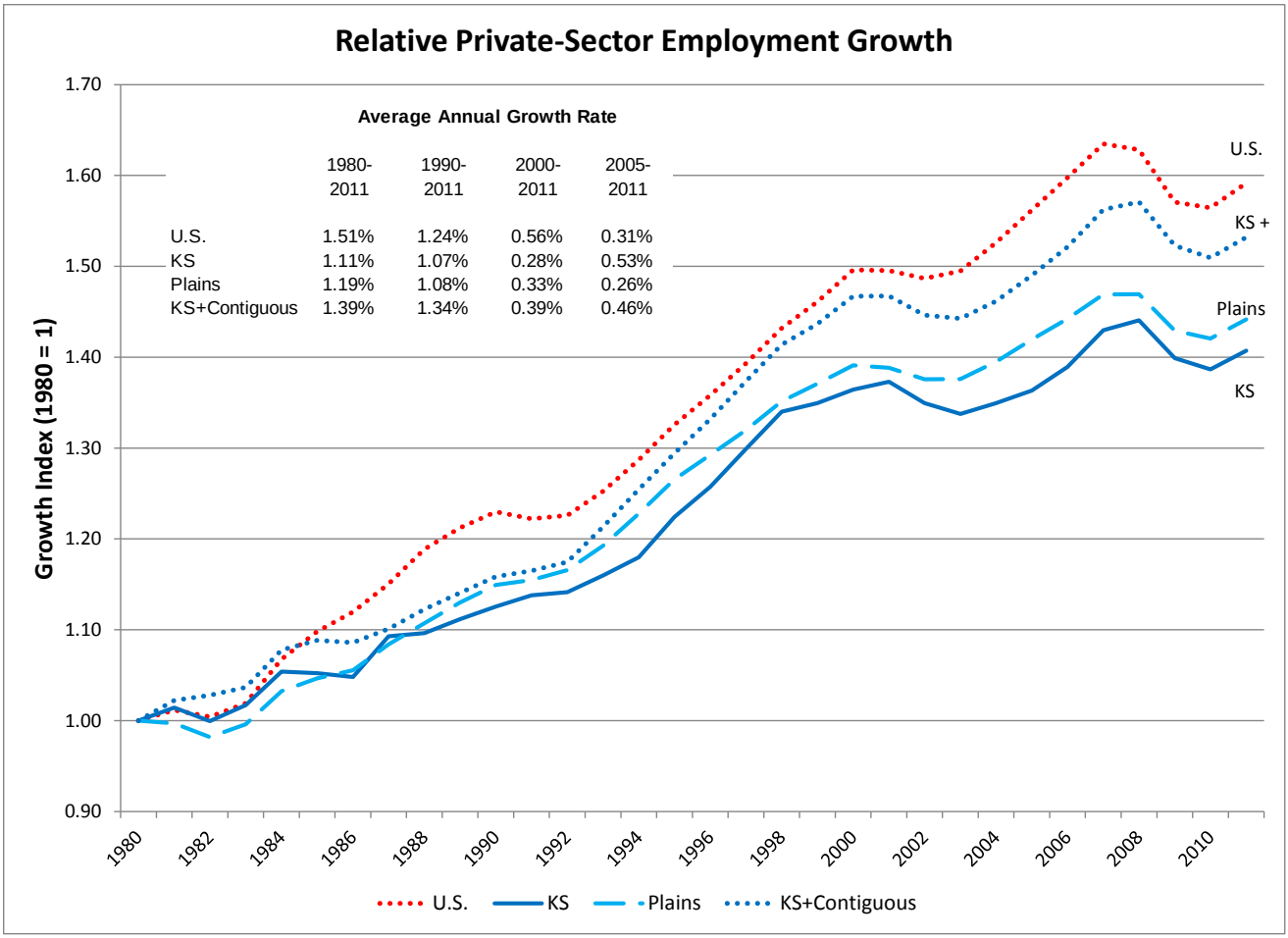


Kansas Close-UP

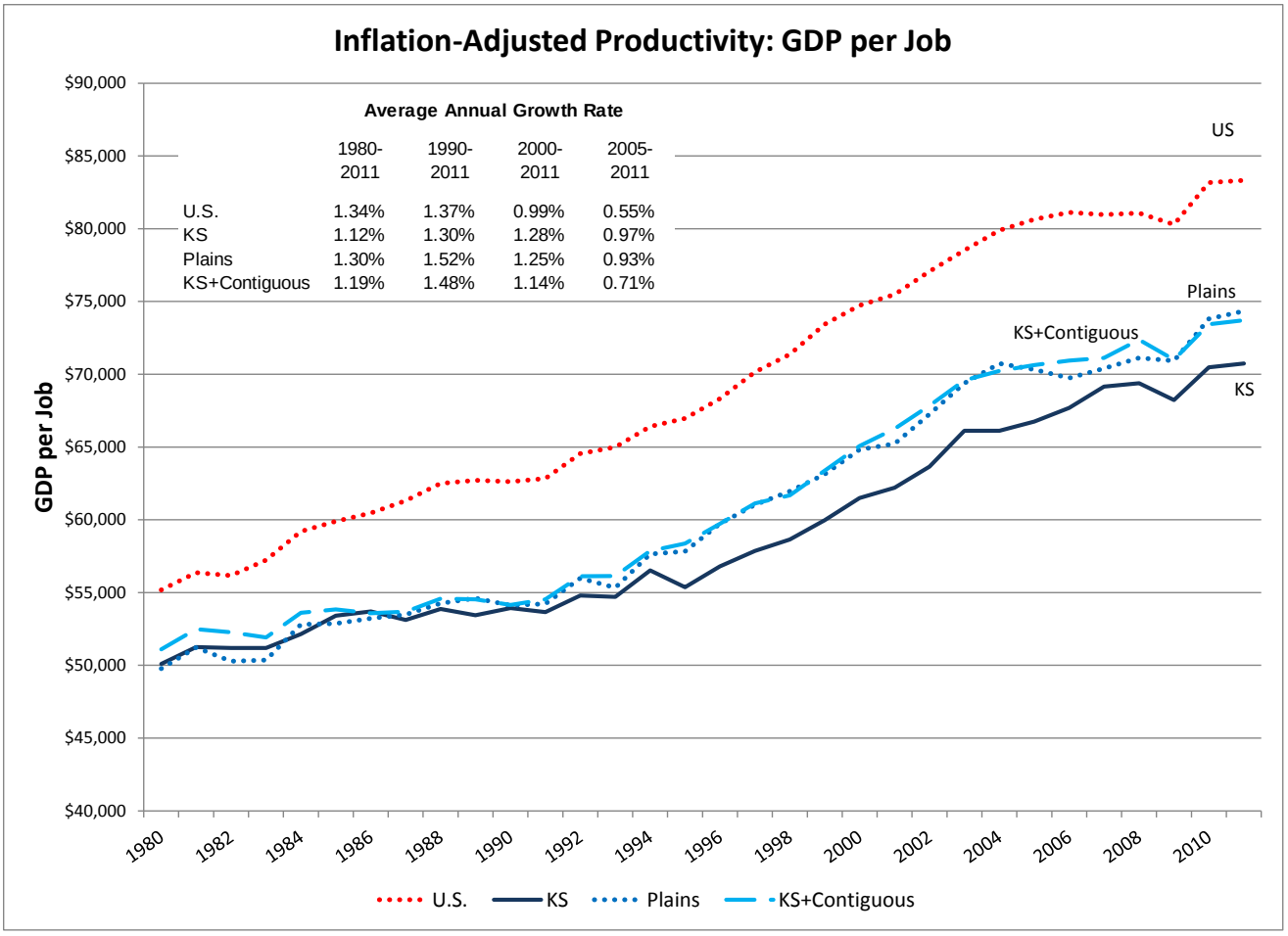


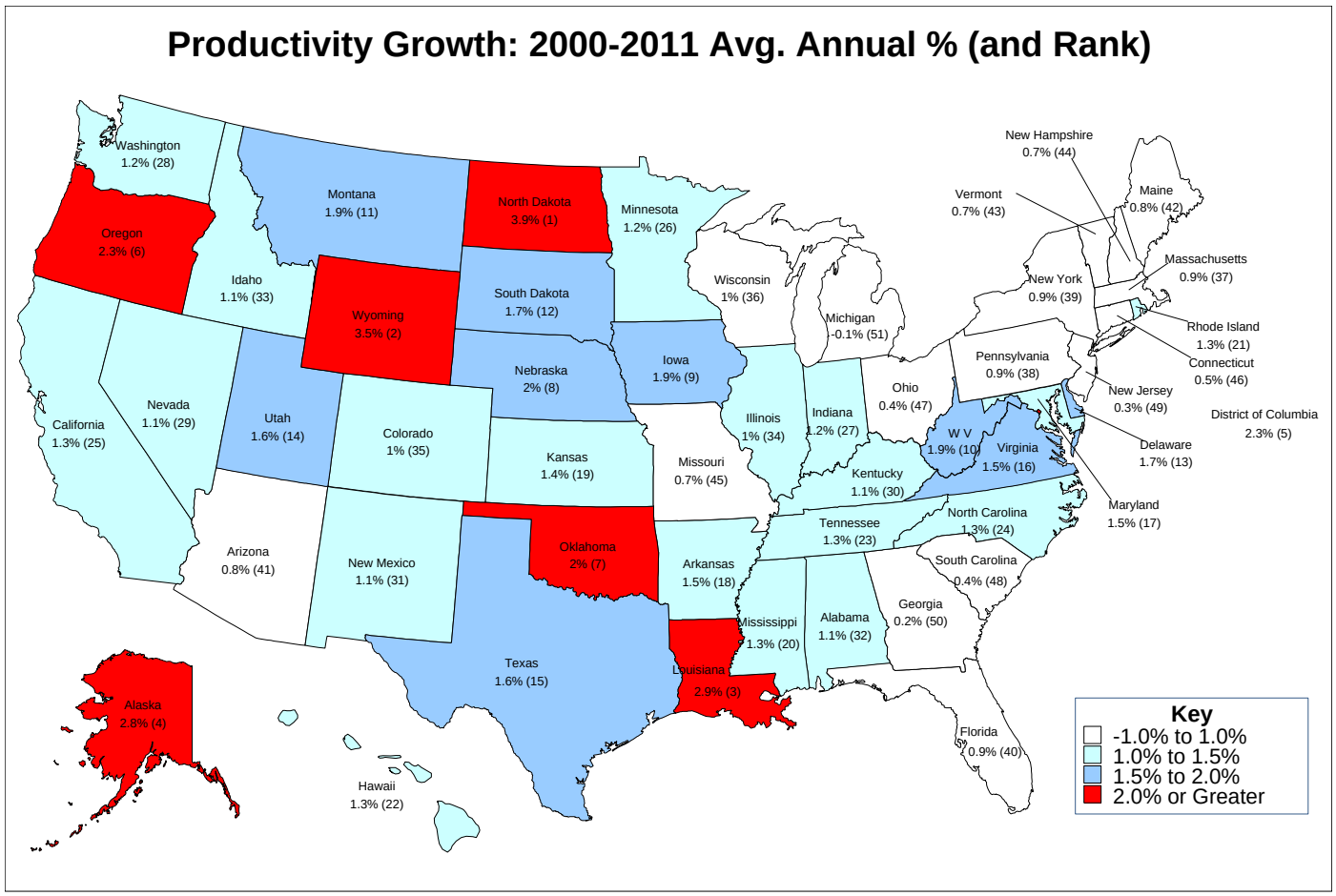

Relative Growth of Business Establishments
Average Annual Growth Rate
1980-2011
1990-2011
2000-2011
2005-2011
U.S. 1.35% 1.00% 0.64% -0.01%
KS 0.80% 0.81% 0.37% -0.35%
Plains 1.02% 1.01% 0.65% -0.14%
KS+Contiguous 1.23% 1.23% 0.71% -0.06%
Growth Index (1980 =1)
1.60
1.50
1.40
1.30
1.20
1.10
1.00
0.90
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
U.S.
KS+Contiguous
Plains
KS
U.S.
KS
Plains
KS+Contiguous

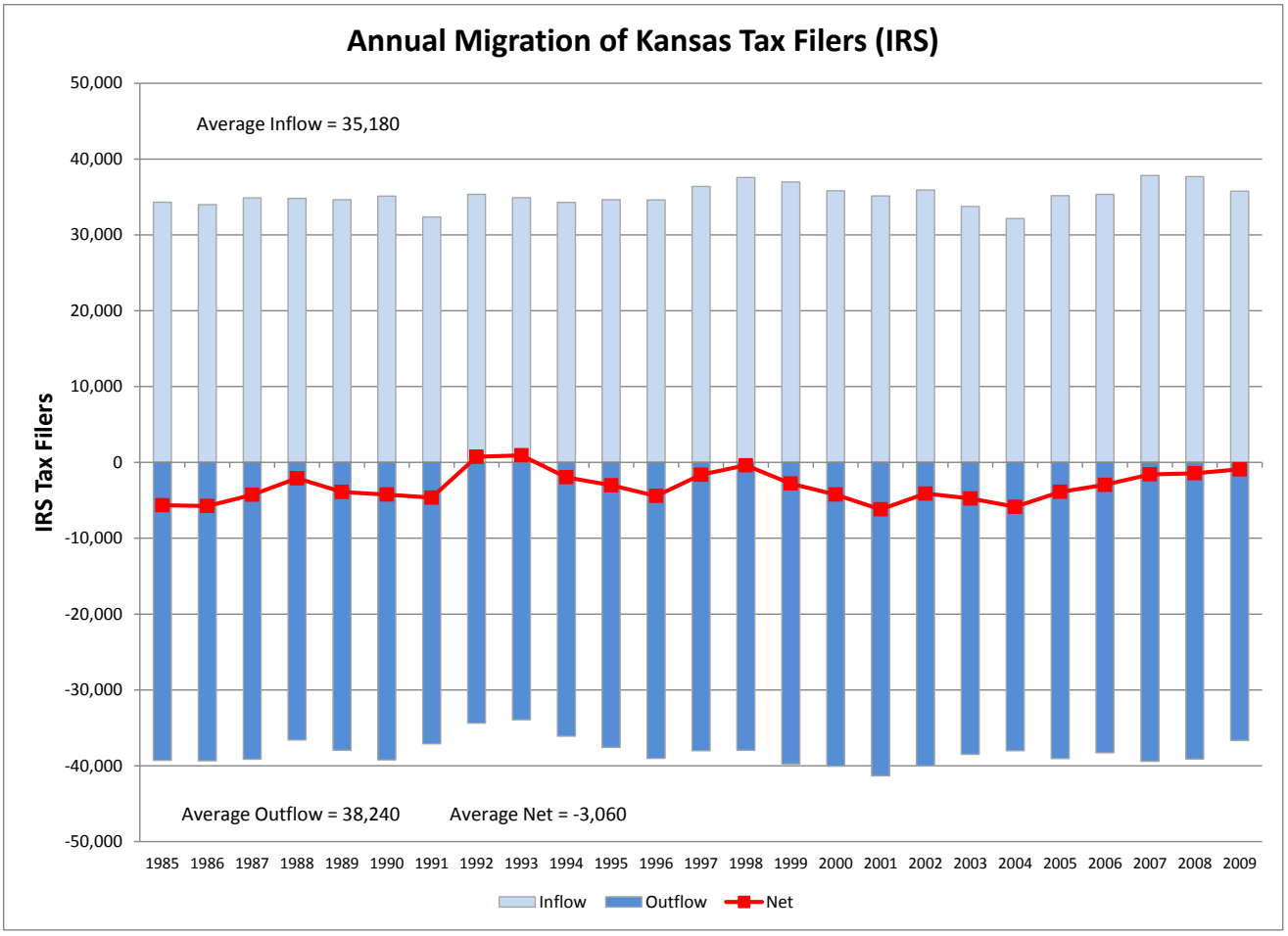

Business Establishment Growth: 2000-2011 Avg. Annual % (and Rank)
Washington 0.8% (21)
Oregon 1% (16)
California 1% (15)
Idaho 1.5% (4)
Nevada 2.1% (2)
Montana 1.3% (8)
Wyoming 1.3% (9)
Utah 2.1% (1)
Arizona 1.3% (7)
Colorado 0.9% (17)
New Mexico 0.6% (27)
North Dakota 1.9% (3)
South Dakota 1.4% (5)
Nebraska 1% (14)
Kansas 0.4% (32)
Oklahoma 0.8% (19)
Texas 1.4% (6)
Minnesota 0.7% (24)
Iowa 0.3% (36)
Missouri 0.5% (29)
Arkansas 0.7% (23)
Louisiana 0.1% (40)
Wisconsin 0.4% (33)
Illinois 0.4% (30)
Michigan -0.9% (51)
Indiana 0.1% (42)
Ohio -0.4% (50)
Kentucky 0.1% (45)
Tennessee 0.2% (38)
Mississippi 0.2% (39)
Alabama 0.1% (41)
Georgia 0.8% (18)
Florida 1.3% (10)
South Carolina 0.6% (28)
North Carolina 0.8% (20)
Virginia 1.1% (12)
WV -0.3% (49)
Pennsylvania 0.3% (35)
New York 0.7% (22)
Maryland 0.7% (26)
Delaware 0.3% (37)
New Jersey -0.2% (47)
Connecticut -0.2% (48)
Rhode Island -0.1% (46)
Massachusetts 0.4% (31)
Vermont 0.1% (44)
New Hampshire 0.1% (43)
Maine 0.3% (34)
District of Columbia 1.2% (11)
Alaska 1.1% (13)
Hawaii 0.7% (25)
Key
Less than 0.0%
0.0% to 1.0%
1.0% to 2.0%
Greater than 2.0%

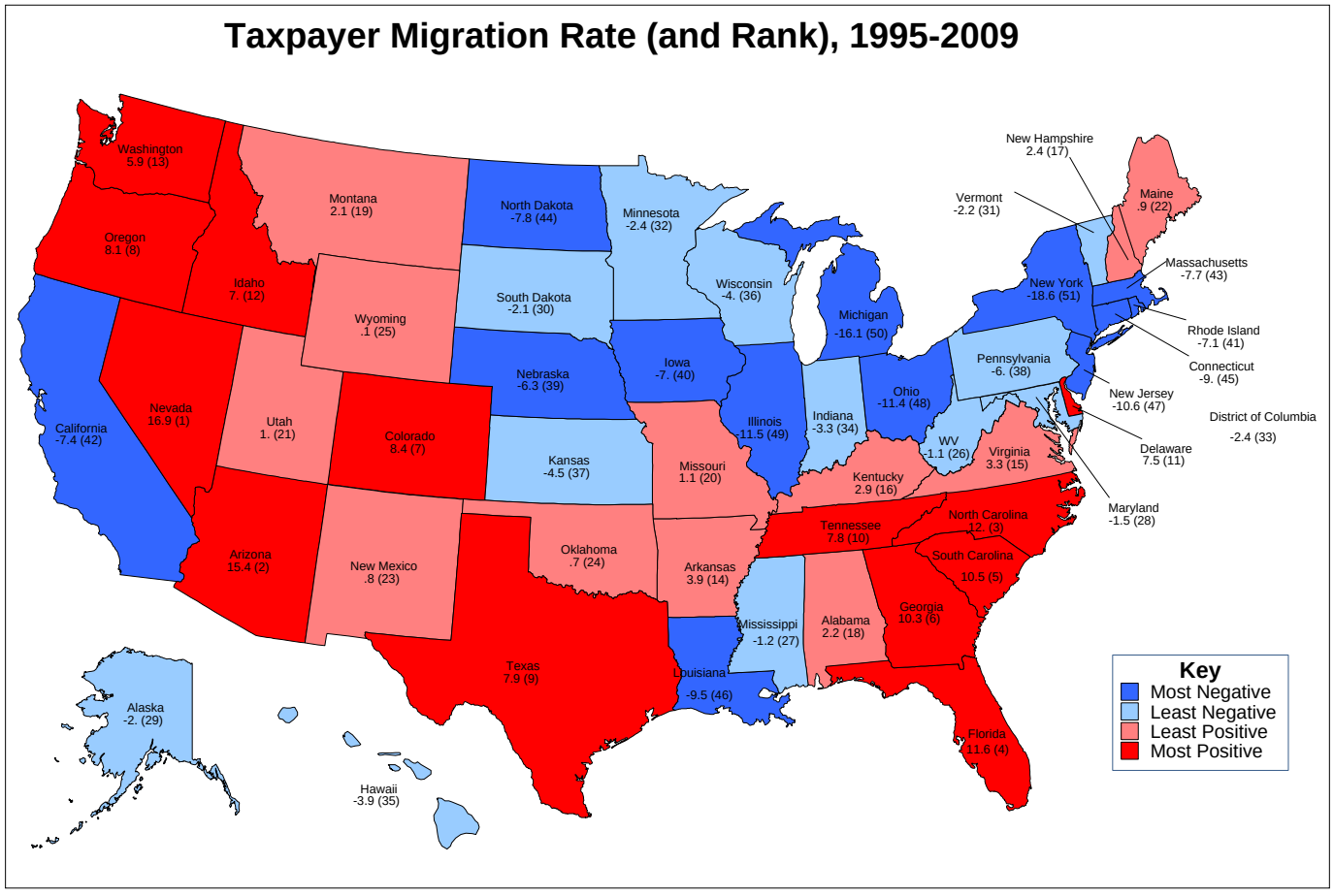

Relative Private-Sector Employment Growth
Average Annual Growth Rate
1980-2011
1990-2011
2000-2011
2005-2011
U.S. 1.51% 1.24% 0.56% 0.31%
KS 1.11% 1.07% 0.28% 0.53%
Plains 1.19% 1.08% 0.33% 0.26%
KS+Contiguous 1.39% 1.34% 0.39% 0.46%
Growth Index (1980 = 1)
1.70
1.60
1.50
1.40
1.30
1.20
1.10
1.00
0.90
1980 1982 1984 1986 1988 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010
U.S.
KS +
Plains
KS
U.S. KS Plains KS+Contiguous

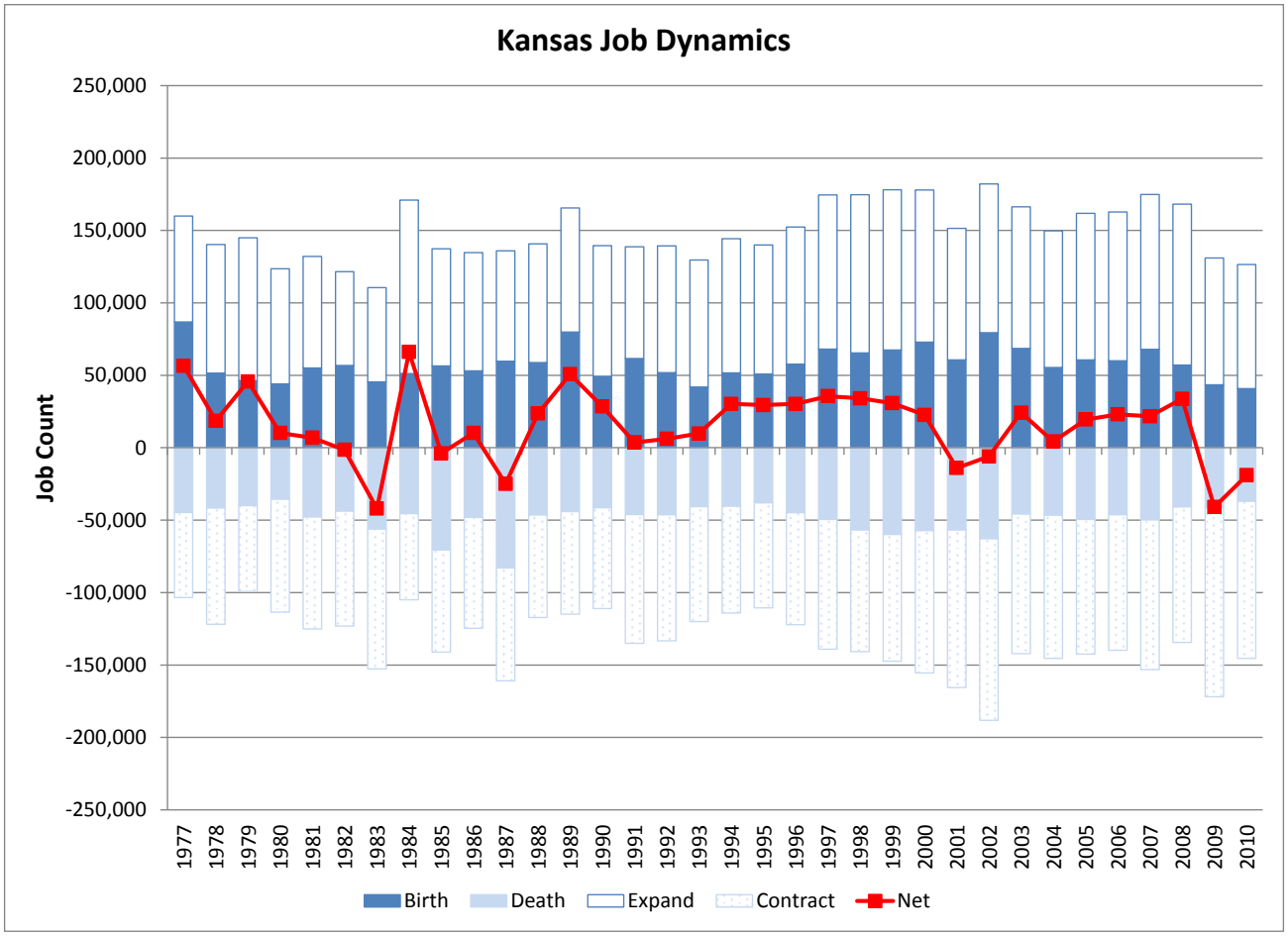

Private-Sector Employment Growth: 2000-2011 Avg. Annual % (and Rank)
Washington 0.7% (21)
Oregon 0.5% (26)
California 0.2% (40)
Idaho 1.2% (11)
Nevada 1.6% (5)
Montana 1.2% (9)
Wyoming 1.8% (1)
Utah 1.7% (3)
Colorado 0.7% (22)
Arizona 1.3% (7)
New Mexico 1% (13)
North Dakota 1.7% (4)
South Dakota 0.8% (18)
Nebraska 0.4% (33)
Kansas 0.3% (37)
Oklahoma 0.6% (23)
Texas 1.8% (2)
Minnesota 0.4% (32)
Iowa 0.2% (42)
Missouri 0% (47)
Arkansas 0.2% (41)
Louisiana 1% (14)
Wisconsin 0.2% (43)
Illinois 0% (48)
Michigan -0.7% (51)
Indiana -0.3% (49)
Ohio -0.4% (50)
Kentucky 0.1% (46)
Tennessee 0.3% (39)
Mississippi 0.1% (45)
Alabama 0.3% (35)
Georgia 0.8% (19)
Florida 1.2% (10)
South Carolina 0.9% (16)
North Carolina 0.5% (24)
Virginia 0.9% (17)
W V 0.4% (34)
Pennsylvania 0.4% (30)
New York 0.8% (20)
Maryland 0.9% (15)
Delaware 0.5% (28)
New Jersey 0.5% (25)
Connecticut 0.5% (27)
Rhode Island 0.3% (38)
Massachusetts 0.3% (36)
Maine 0.2% (44)
Vermont 0.4% (31)
New Hampshire 0.4% (29)
District of Columbia 1.3% (8)
Alaska 1.4% (6)
Hawaii 1% (12)
Key
Less than 0.0%
0.0% to 0.5%
0.5% to 1.0%
1.0% to 100.0%


Inflation-Adjusted Productivity: GDP per Job
Average Annual Growth Rate
1980-2011
1990-2011
2000-2011
2005-2011
U.S. 1.34% 1.37% 0.99% 0.55%
KS 1.12% 1.30% 1.28% 0.97%
Plains 1.30% 1.52% 1.25% 0.93%
KS+Contiguous 1.19% 1.48% 1.14% 0.71%
US
Plains
KS+Contiguous
KS
GDP per Job
$90,000
$85,000
$80,000
$75,000
$70,000
$65,000
$60,000
$55,000
$50,000
$45,000
$40,000
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
U.S.
KS
Plains
KS+Contiguous


Productivity Growth: 2000-2011 Avg. Annual % (and Rank)
Washington 1.2% (28)
Oregon 2.3% (6)
California 1.3% (25)
Nevada 1.1% (29)
Idaho 1.1% (33)
Montana 1.9% (11)
Wyoming 3.5% (2)
Utah 1.6% (14)
Colorado 1% (35)
Arizona 0.8% (41)
New Mexico 1.1% (31)
North Dakota 3.9% (1)
South Dakota 1.7% (12)
Nebraska 2% (8)
Kansas 1.4% (19)
Oklahoma 2% (7)
Texas 1.6% (15)
Minnesota 1.2% (26)
Iowa 1.9% (9)
Missouri 0.7% (45)
Arkansas 1.5% (18)
Louisiana 2.9% (3)
Wisconsin 1% (36)
Illinois 1% (34)
Michigan -0.1% (51)
Indiana 1.2% (27)
Ohio 0.4% (47)
Kentucky 1.1% (30)
Tennessee 1.3% (23)
Mississippi 1.3% (20)
Alabama 1.1% (32)
Georgia 0.2% (50)
Florida 0.9% (40)
South Carolina 0.4% (48)
North Carolina 1.3% (24)
Virginia 1.5% (16)
W V 1.9% (10)
Pennsylvania 0.9% (38)
New York 0.9% (39)
Maryland 1.5% (17)
Delaware 1.7% (13)
New Jersey 0.3% (49)
Connecticut 0.5% (46)
Rhode Island 1.3% (21)
Massachusetts 0.9% (37)
Vermont 0.7% (43)
New Hampshire 0.7% (44)
Maine 0.8% (42)
District of Columbia 2.3% (5)
Alaska 2.8% (4)
Hawaii 1.3% (22)
Key
-1.0% to 1.0%
1.0% to 1.5%
1.5% to 2.0%
2.0% or Greater

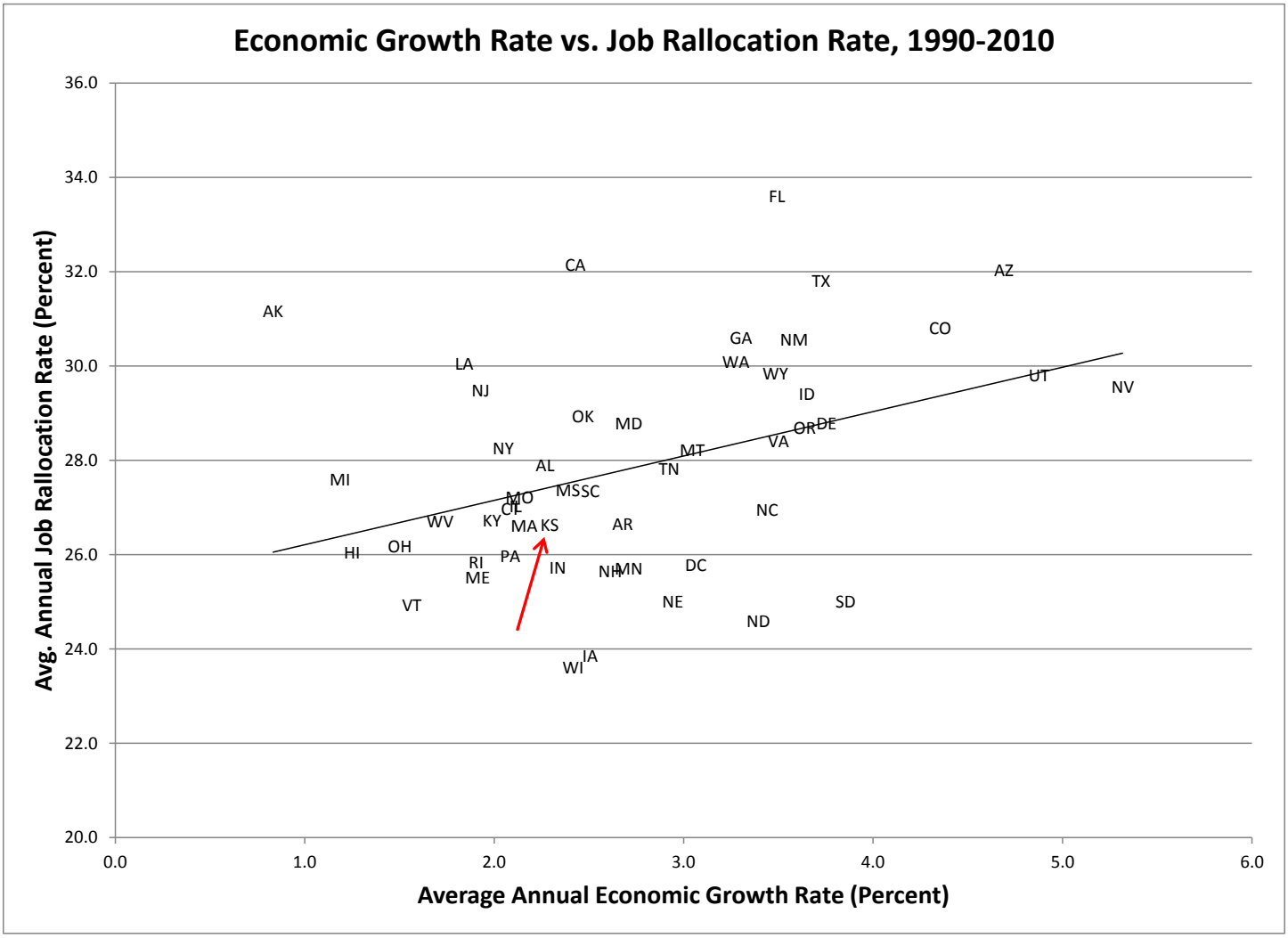

Annual Migration of Kansas Tax Filers (IRS)
IRS Tax Filers
50,000
40,000
30,000
20,000
10,000
0
-10,000
-20,000
-30,000
-40,000
-50,000
Average Inflow = 35,180
Average Outflow = 38,240
Average Net = -3,060
1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009
Inflow
Outflow
Net

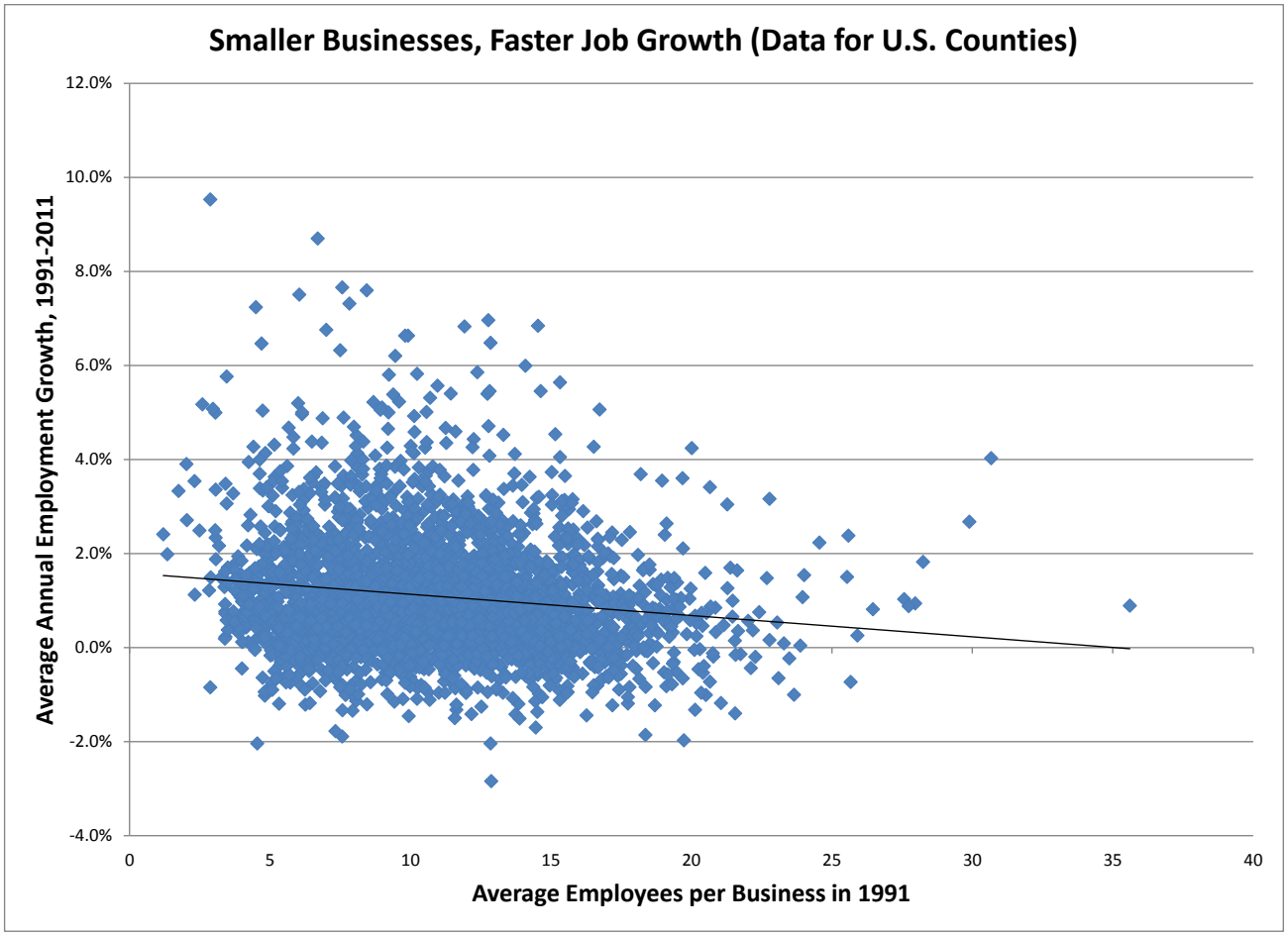

Taxpayer Migration Rate (and Rank), 1995-2009
Washington 5.9 (13)
Oregon 8.1 (8)
California -7.4 (42)
Idaho 7. (12)
Nevada 16.9 (1)
Montana 2.1 (19)
Wyoming .1 (25)
Utah 1. (21)
Colorado 8.4 (7)
Arizona 15.4 (2)
New Mexico .8 (23)
North Dakota -7.8 (44)
South Dakota -2.1 (30)
Nebraska -6.3 (39)
Kansas -4.5 (37)
Oklahoma .7 (24)
Texas 7.9 (9)
Minnesota -2.4 (32)
Iowa -7. (40)
Missouri 1.1 (20)
Arkansas 3.9 (14)
Louisiana -9.5 (46)
Wisconsin -4. (36)
Illinois -11.5 (49)
Michigan -16.1 (50)
Indiana -3.3 (34)
Ohio -11.4 (48)
Kentucky 2.9 (16)
Tennessee 7.8 (10)
Mississippi -1.2 (27)
Alabama 2.2 (18)
Georgia 10.3 (6)
Florida 11.6 (4)
South Carolina 10.5 (5)
North Carolina 12. (3)
Virginia 3.3 (15)
WV -1.1 (26)
Pennsylvania -6. (38)
New York -18.6 (51)
Maryland -1.5 (28)
Delaware 7.5 (11)
New Jersey -10.6 (47)
Connecticut -9. (45)
Rhode Island -7.1 (41)
Massachusetts -7.7 (43)
Vermont -2.2 (31)
New Hampshire 2.4 (17)
Maine .9 (22)
District of Columbia -2.4 (33)
Alaska -2. (29)
Hawaii -3.9 (35)
Key
Most Negative
Least Negative
Least Positive
Most Positive

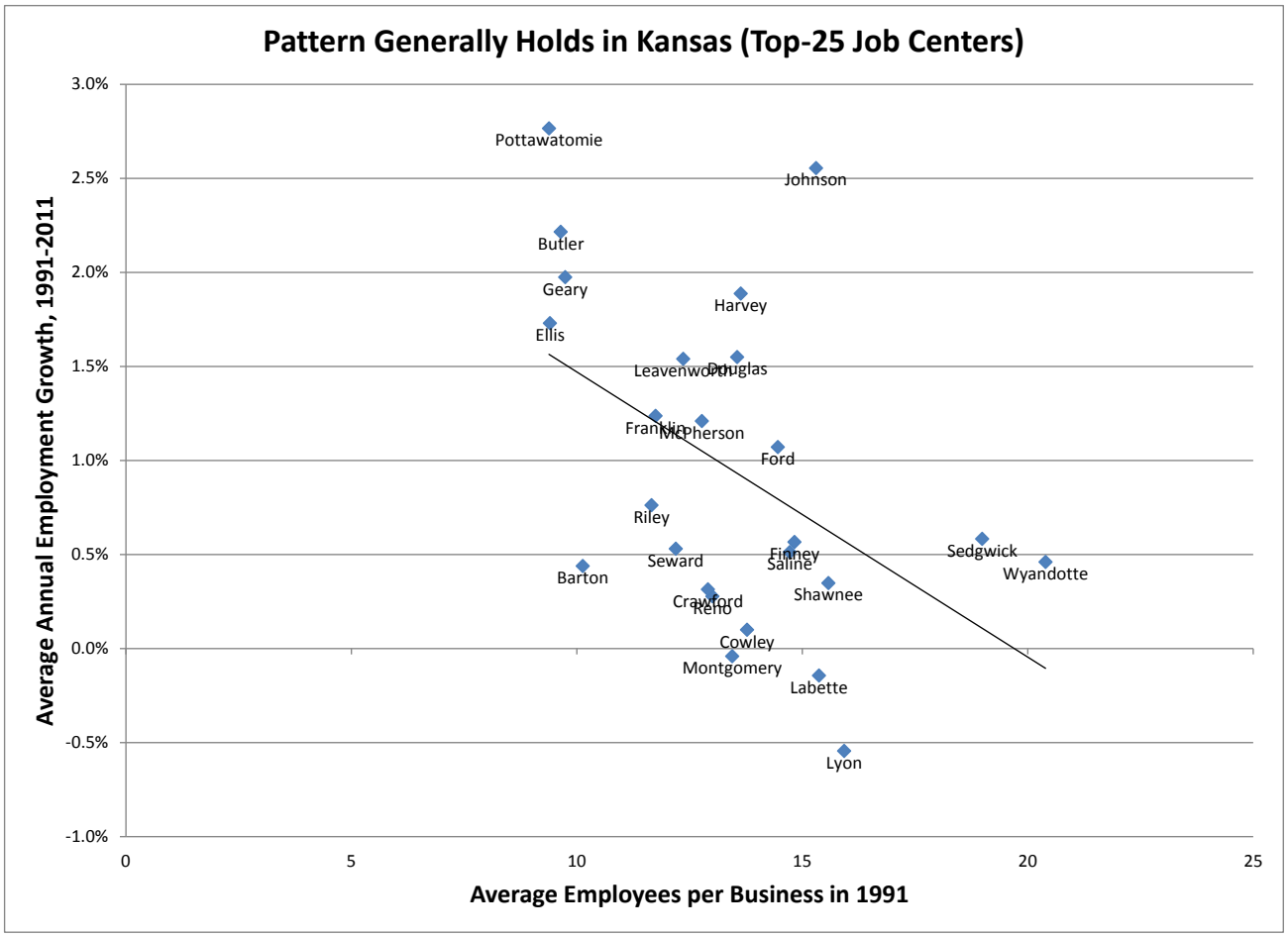


Kansas Net Job Creation by Business Establishment by Age of the Establishment

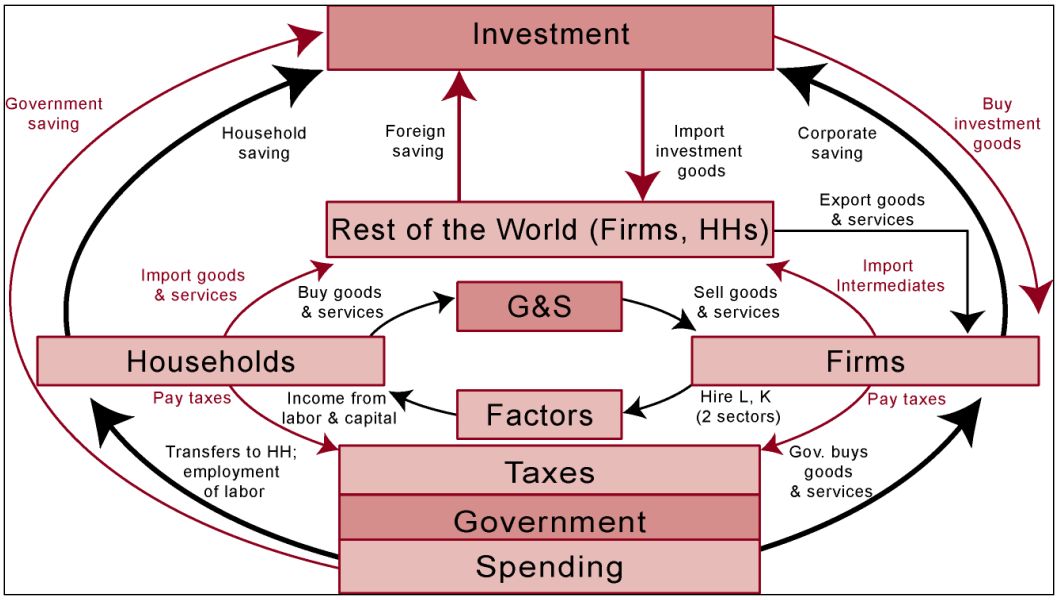
	Age of Business Establishment in Years												Total Net Job Creation	Net Job Creation without Age Zero
	0	1	2	3	4	5	6-10	11-15	16-20	21-25	26+	Left Censored		
1977	86,863											-30,277	56,586	-30,277
1978	48,555	-28,356										-1,605	18,594	-29,961
1979	42,121	-1,532	-2,787									7,919	45,721	3,600
1980	40,857	-3,840	-1,423	-4,801								-20,623	10,170	-30,687
1981	48,538	-3,755	7,714	-6,224	-4,387							-34,979	6,907	-41,631
1982	48,289	-3,734	-3,911	-1,233	-4,262	-2,974						-33,640	-1,465	-49,754
1983	40,974	-4,107	-4,873	-4,039	-16,477	-4,111	-3,497					-45,934	-42,064	-83,038
1984	46,854	-4,759	-2,514	1,638	-600	-1,601	20,731					6,332	66,081	19,227
1985	47,429	-535	-3,798	-3,059	-3,472	-1,417	-27,318					-11,651	-3,821	-51,250
1986	47,317	-7,541	-5,049	-2,141	-2,045	-1,285	-6,466					-12,587	10,203	-37,114
1987	55,129	-5,123	-4,911	-4,728	-3,861	-3,206	-9,623					-48,593	-24,916	-80,045
1988	52,567	-956	-2,853	-1,738	-1,209	-1,676	-7,035	37				-13,502	23,635	-28,932
1989	71,253	-2,495	-4,587	-1,553	-2,653	-518	-2,801	-1,914				-3,996	50,736	-20,517
1990	43,994	903	-1,487	-3,281	-3,036	-1,625	-6,207	183				-966	28,478	-15,516
1991	54,582	-1,269	-5,040	-3,283	-5,994	-2,594	-8,019	-5,932				-18,740	3,711	-50,871
1992	46,098	-4,877	-4,770	-3,113	-1,740	-632	-8,372	-4,663				-11,777	6,154	-39,944
1993	37,775	-2,324	-4,042	-1,549	-4,406	-2,688	-5,665	-1,440	188			-6,079	9,770	-28,005
1994	45,318	-522	-797	-296	-528	-6,496	-4,885	-1,580	-537			567	30,244	-15,074
1995	46,141	430	-2,562	-2,488	-937	-398	-6,140	-1,472	-920			-2,170	29,484	-16,657
1996	51,365	2,084	-2,580	-1,232	-804	-172	-6,087	-4,494	-4,657			-3,179	30,244	-21,121
1997	63,635	-3,868	-3,068	-3,885	-1,729	-2,442	-3,348	-3,035	-2,971			-3,702	35,587	-28,048
1998	59,325	429	-2,835	-3,045	-3,626	-1,077	-625	-2,231	-4,120	118		-8,227	34,086	-25,239
1999	63,649	1,682	-3,939	-2,654	-2,113	-1,780	-9,313	-3,976	-1,696	-3,604		-5,502	30,754	-32,895
2000	67,130	-4,317	-1,253	-3,597	-3,090	-1,923	-8,060	-15,657	-1,608	-2,520		-2,479	22,626	-44,504
2001	54,827	-5,618	-6,762	-4,254	-5,890	-3,173	-11,497	-6,622	-9,321	-2,401		-13,289	-14,000	-68,827
2002	74,474	-3,773	-7,768	-4,717	-7,389	-2,646	-11,680	-16,774	-7,208	-5,926		-12,603	-6,010	-80,484
2003	63,712	-5,964	-1,788	-2,224	-2,901	-4,420	-6,341	-1,325	-3,644	-974	-499	-9,392	24,240	-39,472
2004	50,990	-1,374	-5,173	-2,309	-3,365	-2,640	-10,915	-5,193	-5,023	-2,942	-1,383	-6,344	4,329	-46,661
2005	53,233	-1,480	-13,173	-3,409	-3,990	-1,922	3,010	-3,780	-2,251	-2,382	-325	-4,042	19,489	-33,744
2006	56,417	-1,149	-1,283	680	1,141	-634	-7,463	-7,307	-7,313	-1,481	-2,300	-6,276	23,032	-33,385
2007	62,925	-3,354	-2,898	-1,584	-1,408	-3,440	-7,131	-7,201	-4,442	-2,260	-1,898	-5,573	21,736	-41,189
2008	42,562	-9,059	8,597	-3,189	111	-1,209	-5,040	111	366	-3,500	-287	4,382	33,845	-8,717
2009	39,906	-5,525	-3,822	-15,921	-4,860	-6,001	-10,233	-4,712	-7,199	-5,302	-5,051	-12,190	-40,910	-80,816
2010	37,104	-1,074	-1,257	-4,976	-2,073	-2,524	-8,890	-6,978	-6,677	-3,069	-5,953	-12,564	-18,931	-56,035


Economic Growth Rate vs. Job Rallocation Rate, 1990-2010
Avg. Annual Job Rallocation Rate (Percent)
Average Annual Economic Growth Rate (Percent)
36.0
34.0
32.0
30.0
28.0
26.0
24.0
22.0
20.0
0.0
1.0
2.0
3.0
4.0
5.0
6.0
FL
CA
TX
AZ
AK
CO
GA
NM
WA
WY
LA
UT
NJ
ID
NV
OK
MD
OR
DE
NY
VA
MT
AL
TN
MI
MS
SC
MO
CT
NC
WV
KY
MA
KS
AR
HI
OH
PA
RI
IN
NH
MN
DC
ME
VT
NE
SD
ND
IA
WI


Smaller Businesses, Faster Job Growth (Data for U.S. Counties)
Average Annual Employment Growth, 1991-2011
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
-2.0%
-4.0%
0
5
10
15
20
25
30
35
40
Average Employees per Business in 1991


Pattern Generally Holds in Kansas (Top-25 Job Centers)
Average Annual Employment Growth, 1991-2011
3.0%
2.5%
2.0%
1.5%
1.0%
0.5%
0.0%
-0.5%
-1.0%
0
5
10
15
20
25
Average Employees per Business in 1991
Pottawatomie
Johnson
Butler
Geary
Harvey
Ellis
Leavenworth
Douglas
Franklin
McPherson
Ford
Riley
Sedgwick
Finney
Saline
Wyandotte
Seward
Barton
Shawnee
Crawford
Reno
Cowley
Montgomery
Labette
Lyon

Comments on "Dynamic Scoring" of Proposed Legislation



- Dynamic scoring results from using a computer program to handle the array of potential interactions that may result from a change in public policy. By necessity, the computer program must model the change process based on a variety of assumptions and simplifications. Any such model would need to treat Kansas as a small, open economy—meaning that people and capital are free to flow in and out based on the relative attractiveness of Kansas as an economic platform relative to other places in the world. As all of the evidence above suggests, the process is complicated, highly variable, and covers significant amounts of time.

- The schematic above represents one way to visualize the interactive elements of a computer model. Every arrow embodies a variety of (research-based) analytical assumptions about how the world works. Not all computer models of economies are built the same. Different models have differing approaches to the mechanisms of economic change. All of them, by necessity, assume the (statistical) outcomes of the past will be the outcomes of the future.

- Opinion: Computer models are useful tools for doing "what if" analysis to compare different policy proposals. They are useful simulation tools—not forecasting tools. Economists have no claim to being better forecasters of the future than anyone else.

- From a budget scoring perspective, especially at the state level (because of balanced budget requirements), the most challenging aspect of dynamic scoring is timing. The outcome of economic research is often compelling enough to be able to "predict" the general direction of economic change—but not the specifics, especially as the specifics relate to timing. (For example, it will be hot in July but what will be the temperature on July 4th?)

- Opinion: So-called "static" scoring is the more conservative approach to budgeting. Dynamic analysis is a legitimate method/tool to assist with decision-making about the desirability of potential outcomes related to policy changes. But the budgeting of such changes on a static basis is the more fiscally conservative approach.