

**ANALYSIS OF COVERED WAGES ACROSS KANSAS  
BASED ON RURAL-URBAN CONTINUUM CODES**

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## Introduction

Rural-Urban continuum codes distinguish metropolitan counties by size, and non-metropolitan counties by degree of urbanization and proximity to metro areas. The patterns revealed by these codes give extension and research faculty a way to cluster similar counties. This allows them to conduct educational programs and pursue research targeted on similar versus dissimilar settings. The map with the codes and the key for the codes follow the introduction. In a 1993 USDA publication, Margaret Butler and Calvin Beale published their 1993 Rural-Urban Continuum Codes for all U.S. counties. Butler and Beale in this publication state that,

....“this scheme allows researchers to break county data into finer residential groups, beyond metro and non-metro, particularly for the analysis of trends in non-metro areas that are related to population density and metro influence. Non-metropolitan counties are classified according to aggregate size of their urban (city) populations. Within the three urban size categories, counties adjacent to an MSA are identified. Adjacent counties: 1) are physically, adjacent to one or more MSAs and 2) have at least two percent of the employed labor in the non-metro county commuting to central metro counties. Non-metro counties that do not meet the above criteria fall into the ‘non-adjacent’ category.”

This report offers the reader the ways of identifying the similarity and dissimilarity of the a county with respect to other counties in

the state of Kansas. For example, Reno County compares to Crawford and Cowley with code (4), while Ford County is similar to Ellis, Finney, Lyon and Riley Counties with code (5). K-State Extension and Research annually reviews to revise State of Kansas County’s codes based on new U.S. Census Bureau information. A new coding system has been recently developed by the Economic Research Service (ERS), they have named it the ERS Urban Influence Codes (Parker, [www.ers.usda.gov/data/](http://www.ers.usda.gov/data/); accessed on 6.2.2004). Also, a rural code has been added to identify the most isolated counties (Code 10). They are not adjacent to counties offering 10,000 or more jobs.

## Rural Urban Continuum Codes: Average Wages in Private and Government Sector

Based on the Rural Urban Continuum Code analysis, the 2002 wages in the private sector ranges from \$20,700 (R-U code 10) to \$36,932 (R-U code 0) whereas 2002 wages in the public sector range from \$18,912(R-U code 10) to \$37,245(R-U code 0). The overall state private wage is \$31,060 and the overall state government wage is \$29,772. The wages in the urban areas are the highest in both the public and the private sectors when compared to all the areas. In general, the wages in the private sectors are higher than the public sectors but it varies from region to region. There are six areas where the wages in private sector is higher than the government wages with R-U continuum codes of 2,6,7,8,9 and 10. The government sector pays higher wages in the other five areas with R-U continuum codes of 0, 1, 3, 4 and 5. The highest public sector wages are paid in Riley County and the highest private sector wages are paid in Johnson County. In Riley County the public sector pays higher

(41,137) than private (21,032) sector whereas in Johnson County the private sector pays higher (38,608) than public sector (33,856).

There are 9 Metropolitan counties in this analysis and the metropolitan counties are coded 0,1,2 and 3. The largest metro in Kansas is part of Kansas City metropolitan area. Private and public sector wages are higher here than any other area of Kansas, however it depends on the county of interest. For example, wages are high for both public and private sectors in Johnson and Wyandotte County, but drops off dramatically in the adjacent counties of Leavenworth and Miami County. Private sector wages in Leavenworth and Miami County are \$26,348 and \$23,471 respectively. Public sector wages of these two counties are at \$38,249 and \$25,170 respectively. Based on the analysis done in this report, three out of four Kansas City, KS metro counties offer higher paid jobs in Public sector compared to Private sector with the exception of Johnson County. Butler, Harvey and Sedgwick counties

surrounding Wichita MSA is the other metropolitan area reviewed in this report. Wages in the Private sector and Public sector are about the same in Sedgwick County and Butler County but in Harvey County wages in Private sector are higher than Public sector (Figures 1 & 2).

There are 96 Non-metropolitan counties in this analysis and the non-metropolitan county codes are 4,5,6,7,8,9, and 10. Among non-metropolitan counties, the counties with R-U code 4 pays the highest wages in the Private sector, while the counties with R-U code 5 pays the highest wages in the Public sector (Figures 3 & 4).

The difference in private and government wages across Rural-Urban Continuum Codes is evident from Table 1. The Metropolitan and Non-metropolitan counties are distinguished according to the population and proximity to metro areas as presented in Table 2. County-wise, Rural-Urban Continuum Codes for the State of Kansas are depicted in Map-1.

**Table 1: Wages across Rural-Urban Continuum Codes**

Darling's R-U Continuum Codes	CY 2002 Average Private Wages	CY 2002 Average Government Wages
Central city 0	\$36,932	\$37,245
Big metro fringe 1	\$24,910	\$31,710
Wichita metro 2	\$28,522	\$27,628
Lawrence & Topeka 3	\$27,411	\$34,944
Metropolitan fringe 4	\$25,209	\$25,343
Metropolitan Rural 5	\$23,532	\$29,323
Small cities fringe 6	\$22,941	\$22,251
Small cities rural 7	\$22,886	\$21,879
Open country fringe 8	\$22,350	\$20,032
Open country rural 9	\$21,178	\$19,472
Remote 10	\$20,700	\$18,912
State Values	\$31,060	\$29,772

Source: K-State Research and Extension, May 2004

Wage data from the Labor Market Information Services, KDHR (2002)

**TABLE 2: RURAL - URBAN CONTINUUM CODES**

**Metro Counties:**

- 0 Central counties of metro areas of 1 million population or more
- 1 Fringe counties of metro areas of 1 million population or more
- 2 Counties in metro areas of 250,000 to 1 million population
- 3 Counties in metro areas of fewer than 250,000 population

**Non-metro Counties:**

- 4 Counties with urban populations of 20,000 or more, adjacent to a metropolitan county
- 5 Counties with urban populations of 20,000 or more, not adjacent to a metropolitan county
- 6 Counties with urban populations of 2,500 to 19,999, adjacent to a metropolitan county
- 7 Counties with urban populations of 2,500 to 19,999, not adjacent to a metropolitan county
- 8 Completely rural counties (no cities with populations greater than 2,500), adjacent to 1 or more metropolitan counties
- 9 Completely rural counties (no cities with populations greater than 2,500), not adjacent to a metropolitan county
- 10 Most rural counties (no cities with populations greater than 2,500), not within easy commuting distance to a county offering 10,000 or more jobs

Codes	Number of Counties
<b>Metro Counties</b>	
0	2
1	2
2	3
3	<u>2</u>
	Total 9
<b>Non-metro Counties</b>	
4	3
5	8
6	11
7	28
8	6
9	19
10	<u>21</u>
	Total 96

Figure 1: Average Private Wages across Rural-Urban Continuum Codes 0-5



Figure 2: Average Government Wages across Rural-Urban Continuum Codes 0-5

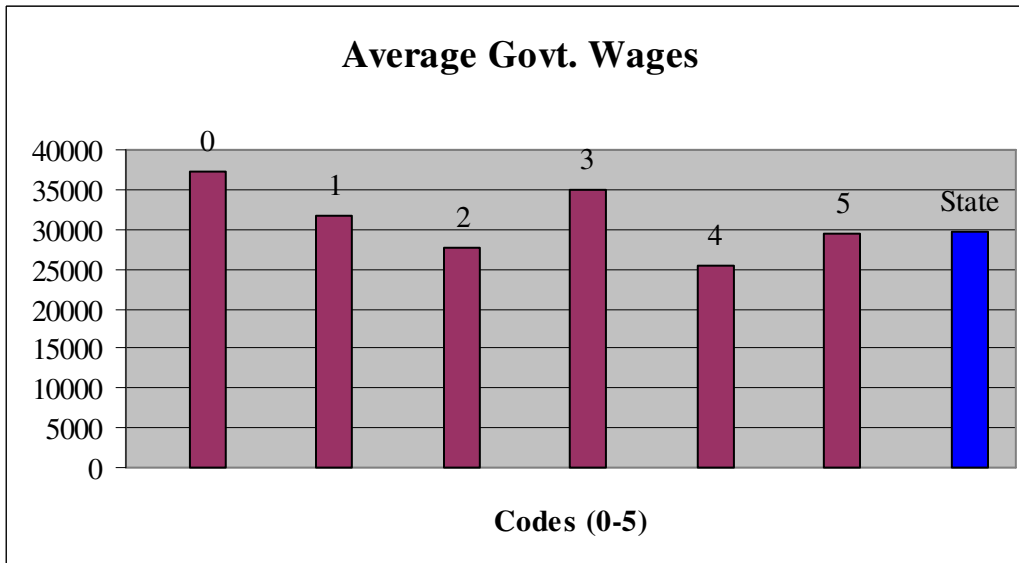


Figure 3: Average Private Wages across Rural-Urban Continuum Codes 6-10

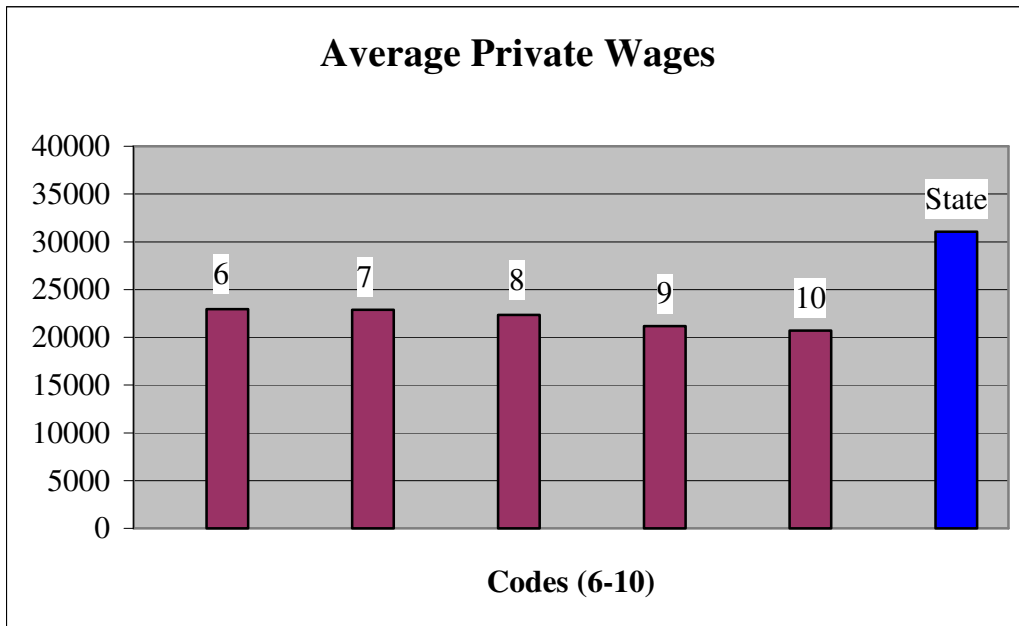
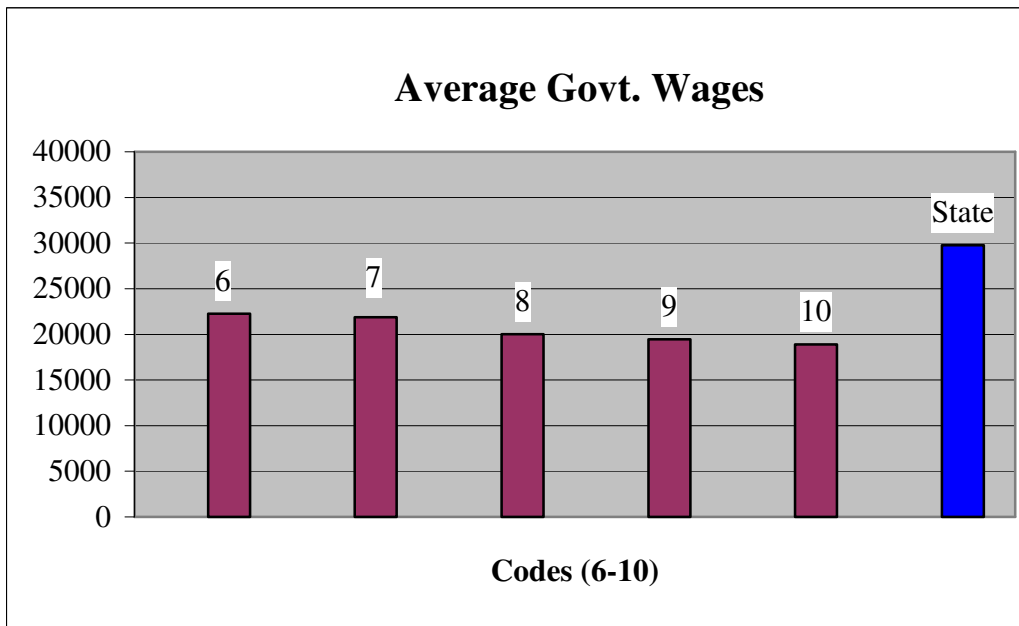


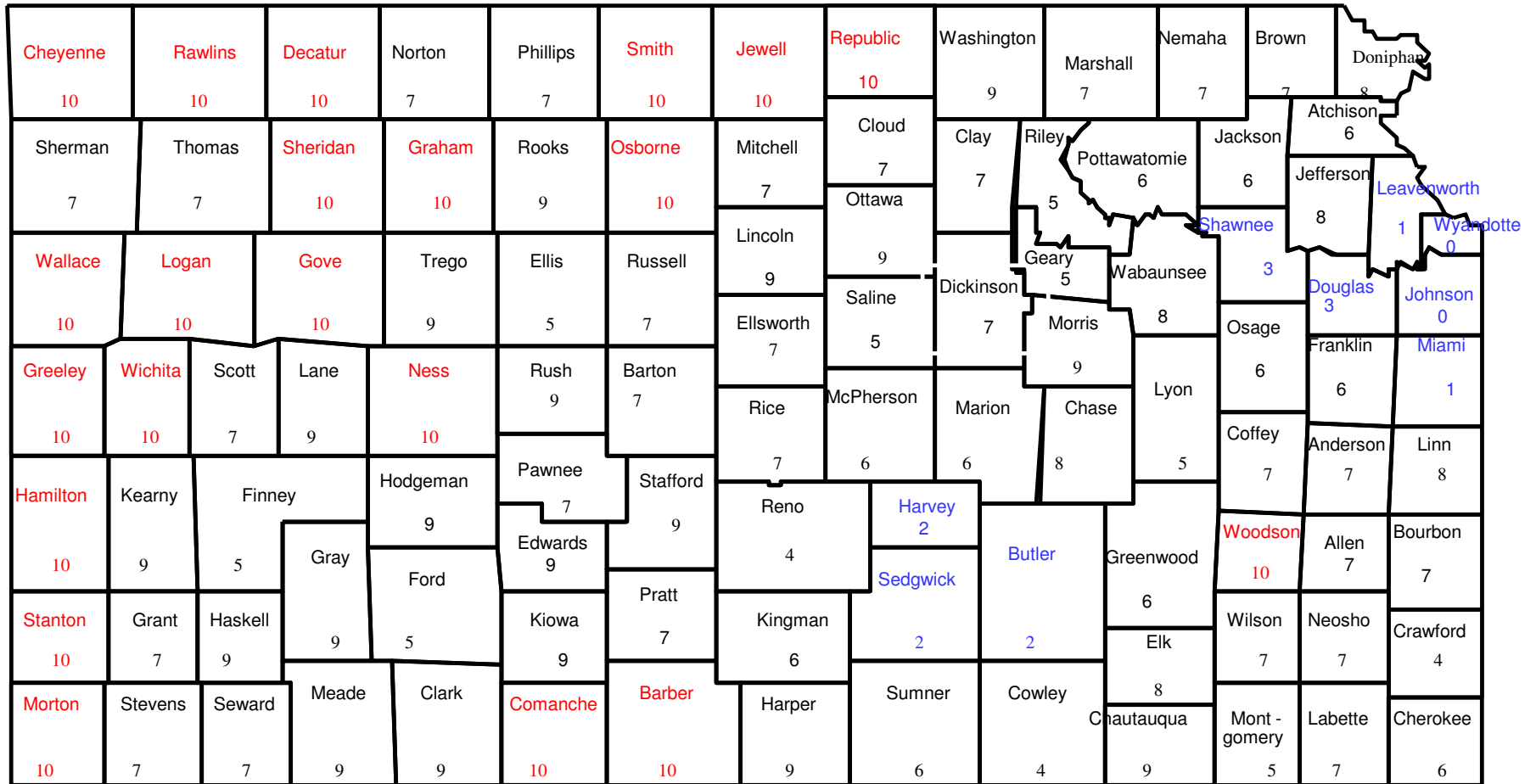
Figure 4: Average Government Wages across Rural-Urban Continuum Codes 6-10



**MAP-1**

**Rural – Urban Continuum Codes – FY 2002**

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Maps Produced by : K – State Research and Extension, Department of Agriculture Economics

Counties in red are non-metro counties with an RUCC 10  
Counties in white are non-metro counties  
Counties in Blue are metro counties

## Data Sources

1. Wage data from 2002 Annual Labor Market Information Services, Kansas Department of Human Resources Employment and Wages.

## References

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