

Upstate Warrior Solution: Analyzing Veteran Income, Unemployment, and Homelessness



Sean Rusnak

Earth and Environmental Sciences, Furman University, Greenville, SC 29613



Abstract

Veterans are one of the most vulnerable populations in the United States. Underfunded medical care, lack of support networks, and unseen mental illnesses such as PTSD are a few of the major challenges that many veterans face. Demer (2011) found, "Veterans struggle to reconnect with family and friends and to fit into civilian society." Due to possible physical and mental disabilities and lack of social support, veterans may find it difficult to secure and maintain employment. Furthermore, the employment that many are able to maintain may be at low income jobs that cannot support all the veteran's needs. Research also suggests that there is income inequality when comparing veterans and non veterans, particularly in the Post-Vietnam era (MacLean 2016). Upstate Warrior Solutions is a not-for-profit organization that seeks to address the needs of veterans in Upstate South Carolina by connecting veterans to resources and establishing long-lasting support networks. The objective of this project is to compare Upstate Veteran Solution's veteran population to the civilian population to observe any significant unique trends.

Upstate Warrior Solution Veteran Density

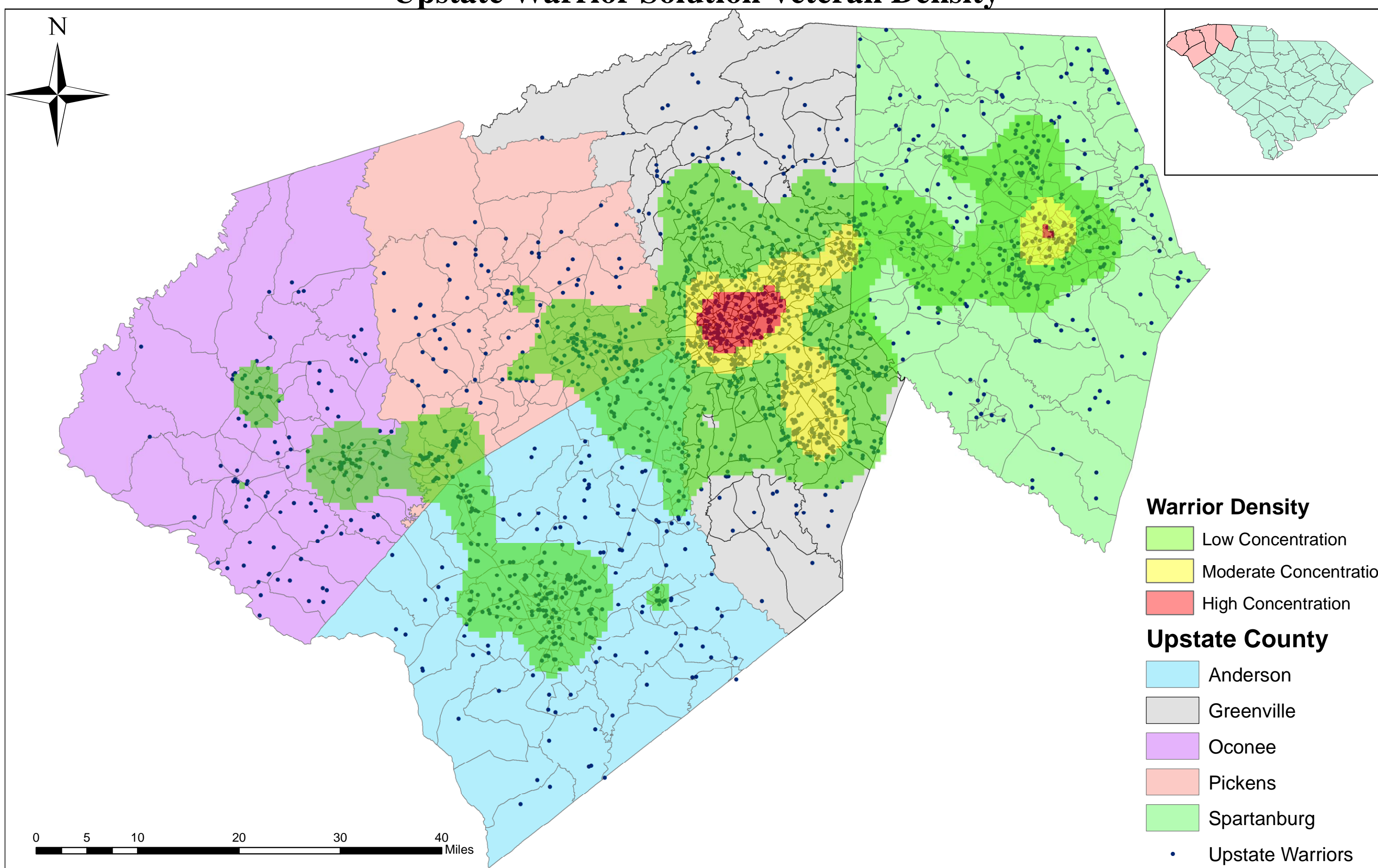


Figure 1. Upstate Warrior Solution serves veterans in all five upstate counties. These veterans tend to aggregate in places that are densely populated.

Data Collection and Methods

All veteran data was obtained from Upstate Warrior Solutions. All the data was anonymized and geocoded by project leader Mike Winiski. All census data was extracted from NHGIS. This data also included the shapefile of South Carolina block groups.

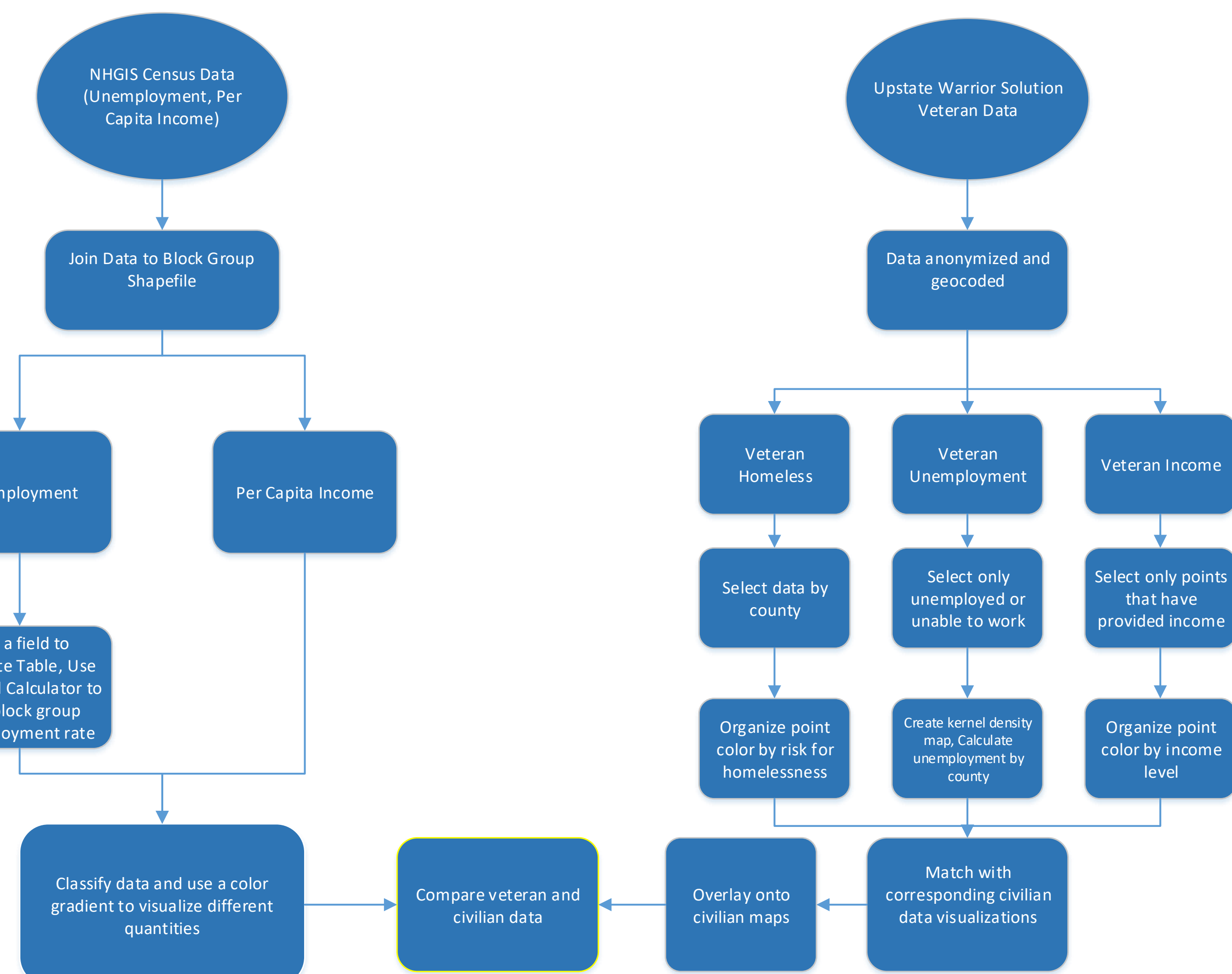


Figure 2. Data was taken from two sources: NHGIS and Upstate Warrior Solution. This data was transformed in several ways to be used as comparative tools, assessing the similarities and differences between veterans and the general population.

Results

Veteran Income Compared to Per Capita Income

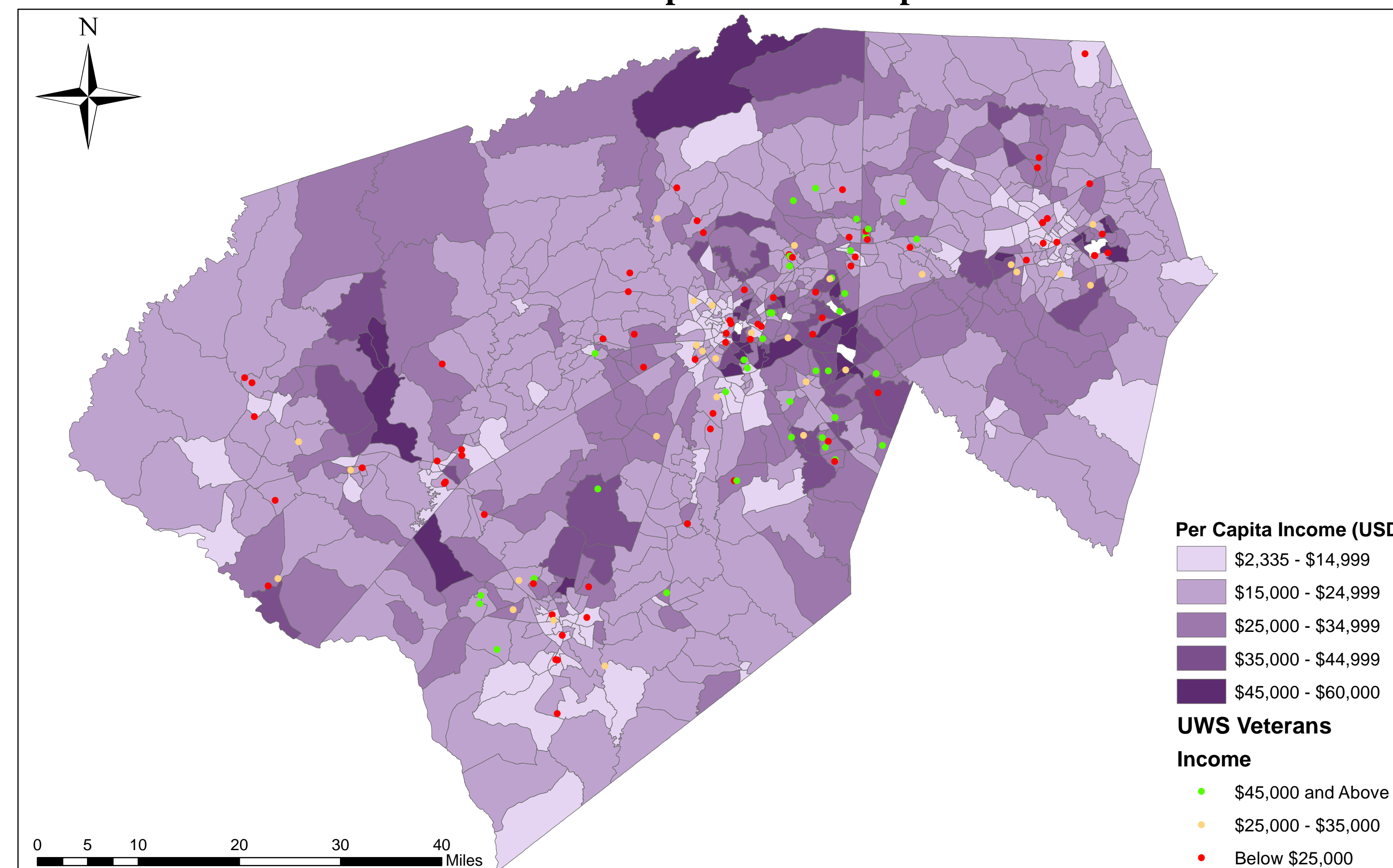
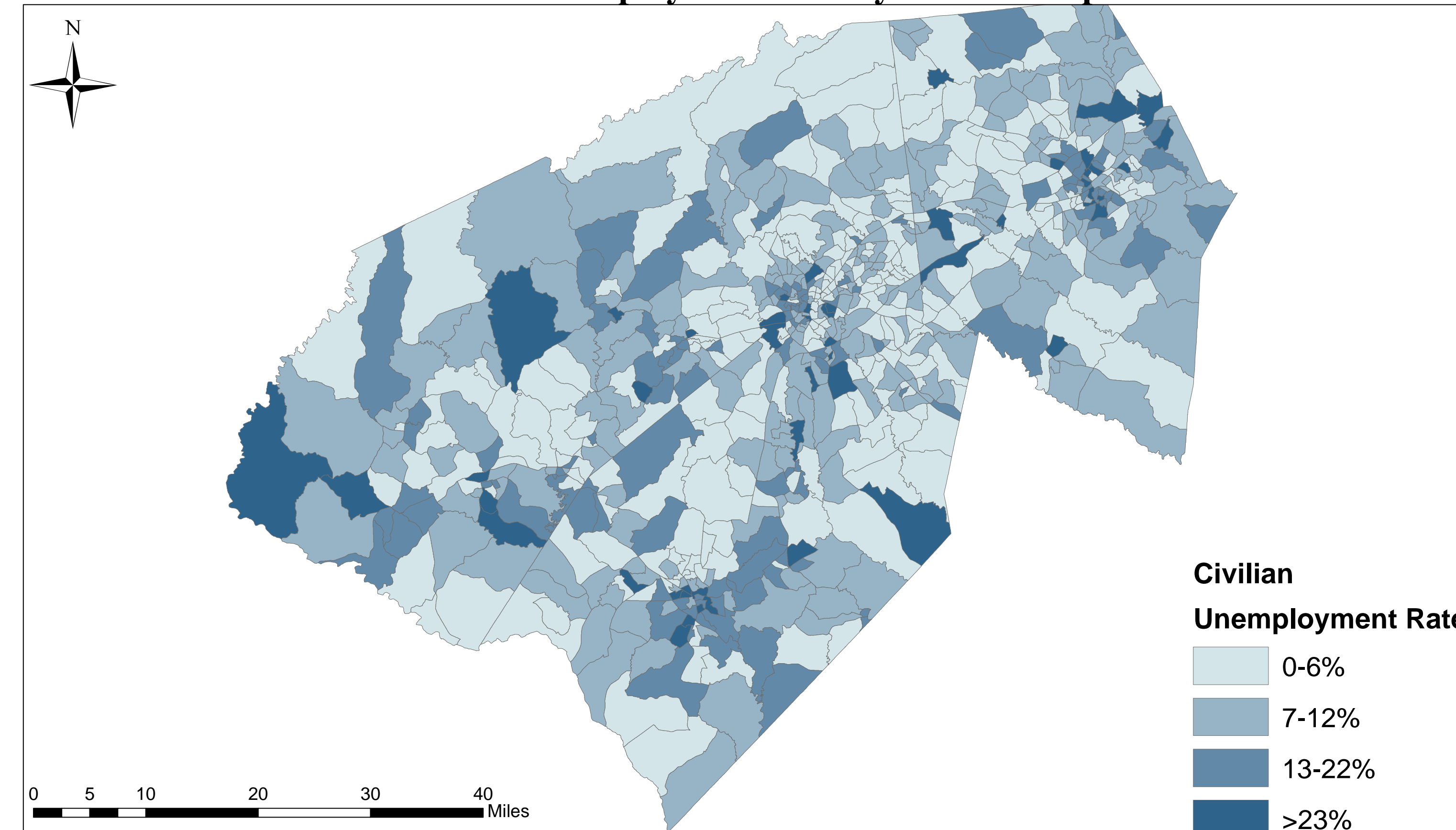


Figure 3. A comparison of income between veteran and civilian populations reveals that veterans often make equal to or below the per capita income of the general population. Veterans with incomes \$45,000 or greater were mostly located in or around Greenville County. Spartanburg on the other hand had a higher proportion of veterans making below \$25,000 in a relatively clustered area. In several areas, veterans were making below the per capita income, which is supported by the aforementioned research of MacLean and Kleykamp (2016). More significant trends may become apparent as more income data is collected in coming years.

Civilian Unemployment Rate by Block Group



Veteran Unemployment Density Map

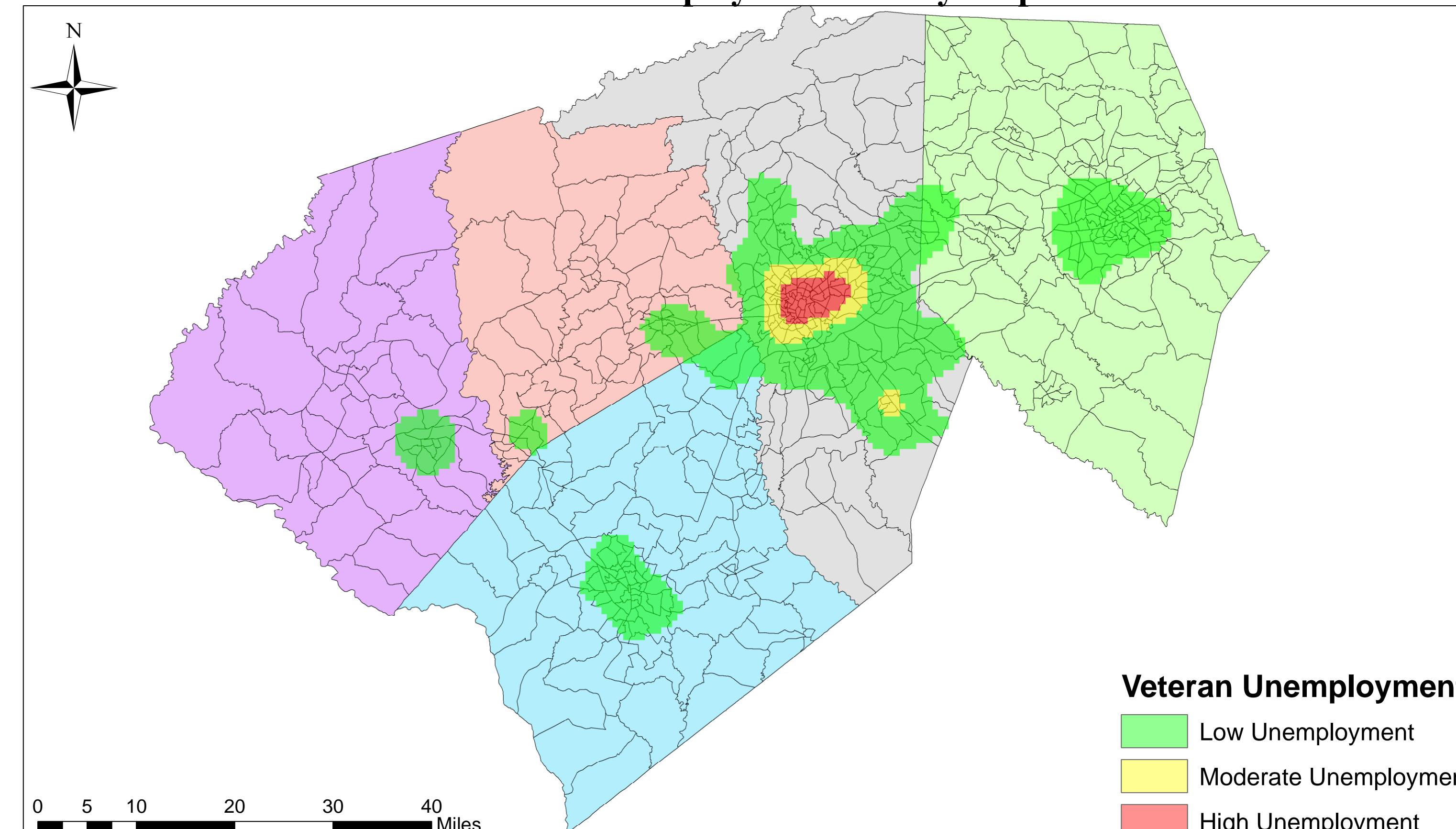


Figure 4. The comparison of veteran unemployment rate with civilian unemployment reveals that veteran unemployment follows similar trends in geographic distribution. Greenville County has the most veterans that are unemployed or unable to work with a significant hotspot in the more densely populated city area. This trend is expected based on the increased total Upstate Warrior Solution veteran population in Greenville, which matches civilian trends. Although, Greenville County's veteran unemployment rate (including inability to work) is significantly higher when compared to other counties at 24.19%. Therefore, not only is the number of veterans without work in Greenville higher, there is a larger proportion of them. Career training and disability resources should be focused in the City of Greenville area primarily and then in the densely populated areas of the four other counties which show minor hotspots of unemployment or inability to work. Veteran Unemployment Rates by County: Anderson (20.75%), Greenville (24.19%), Oconee (20.25%), Pickens (14.46%), Spartanburg (18.75%).

Results (Cont.)

Veterans Potentially at Risk for Homelessness

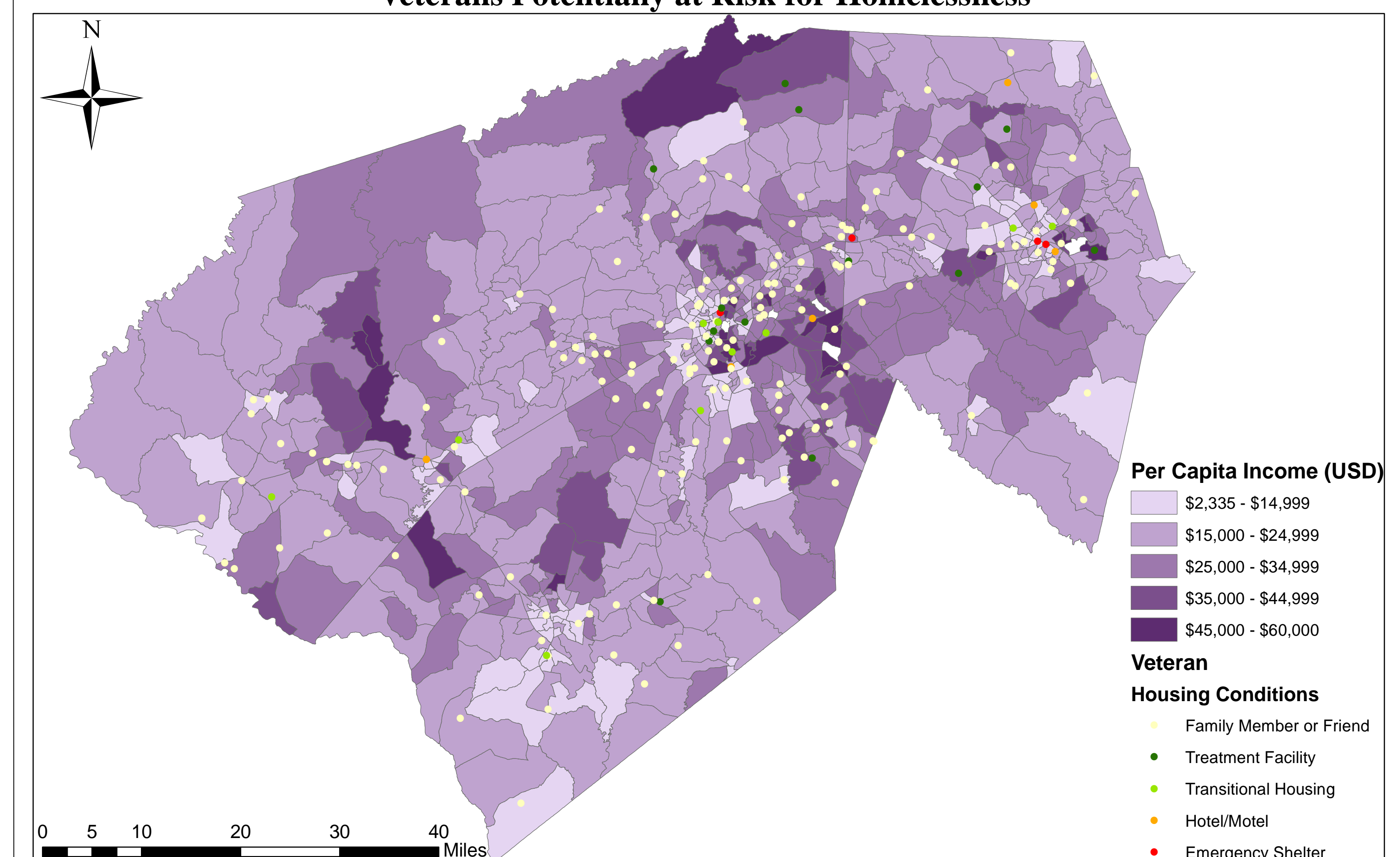


Figure 5. A review of homelessness reveals that most veterans that are at risk for homelessness congregate in more densely populated areas. This phenomenon is likely due to more urbanized areas having increased resources such as service and healthcare providers. Data regarding homelessness is difficult to geographically represent, particularly with irregularities in the data set and in determining what constitutes homelessness. There are differing opinions on whether living in a hotel or a "doubled-up" (with family or friends) household constitutes homelessness. Thus, the maps show different variations on what constitutes populations at-risk for homelessness. The relatively small at-risk population steeply increases by 625% from 35 to 219 when veterans who are living with friends and family are included (shown in yellow). This project was unable to include the data of 195 (10 of which were categorized as homeless) at risk veterans due to the inability to connect them to a geographic location.

Conclusion

Ultimately, several of the trends seen in the civilian community are visible in Upstate Warrior Solution's veteran population as well. As a result, census data can be a good predictor of veteran trends such as income, unemployment, and population density (Pinner, 2016). Upstate Warrior Solution's veteran population did have some significant trends including high unemployment rates in Greenville County, low unemployment rates in Pickens County, and a noticeable cluster of low income veterans in Spartanburg County.

References and Data Sources

References
Demers, A. (2011). When Veterans Return: The Role of Community in Reintegration. *Journal of Loss and Trauma* 16(2), 160-179.

MacLean, A, Kleykamp, M. 2016. Income Inequality and the Veteran Experience. *The Annals of the American Academy of Political and Social Science* 663(1):99-116.

Pinner, Eli. 2016. Mapping Military Veteran Access to Resources in Greenville County: A Partnership with Upstate Warrior Solution.

All census data including the block group shapefile obtained from:
Minnesota Population Center. National Historical Geographic Information System: Version 11.0 [Database]. Minneapolis: University of Minnesota. 2016. <http://doi.org/10.18128/D050.V11.0>.

South Carolina County and State Shapefile:
Taken from ArcGis online base maps. Esri_dm. 2017. USA Counties.

Warrior data:
Provided by Upstate Warrior Solution. Anonymized and geocoded by Mike Winiski.

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