The Demographics and Spatial Distribution of Greenwashing in Greenville, SC An analysis of the Greenwashing score per supermarket and retail store based upon demography within the Greenville city boundaries. Paul Augello

Abstract

The purpose of this study is to compare the demographics that make up a specified area with the Greenwashing score of a supermarket or retail store in that area. The data for the Greenwashing score was collected on a basis of environmental sins committed per product, per store. These "environmental sins" are defined as false claims by companies that say they constitute the practice of eco-friendliness and support the environment with their products. In an effort to reassure consumers, research has been done to provide the false accusations made by companies who say they execute their so-called "green" product. Therefore, the motive for this study is to see if there is a definitive relationship between these stores with high Greenwashing scores and the outlying areas surrounding them in a set radius of a five minute drive-time distance.

I. Introduction / II. Literature Review

In recent years, there has been a rising concern for our environment. Scientists have advocated for the need to preserve our environment due to the heavy human influence brought upon by the Industrial Revolution. In an effort to do this, big corporation businesses have addressed their concern for the environment with the addition of eco-labels to their products. These eco-labels state the products' ensured support of the environment and their minimal impact on the environment itself. However, studies have been done to prove that these businesses' approaches to the environment may not be all that they're cracked up to (Truong 11). Therefore, with the investigation of environmentalists, companies were found to possibly be stretching the truth about their environmentally-friendly claimed products. From this research, the term "Greenwashing" was produced (The Sins of Greenwashing). The project that I have conducted is based on the population of consumers who purchase these products and the amount of Greenwashing in that particular store. Through census data development and a compilation of sins committed per product in each undisclosed store, a relationship can be made between these data sets.

III. Methodology

Steps taken:

Compile census data for Greenville block groups.

Insert Greenville county shapefile with block groups containing most recent census data.

Join census data to geographic boundaries.

Obtain retail stores and supermarkets within the Greenville city-boundaries.

Create a point for each individual store on ArcMap without disclosing store name for confidentiality. Create a driving-time radius for each store recorded using Business Analysis.

Collect Greenwashing data, compiled by Haley Jones, from each store and place within attribute table. Convert Greenwashing data from number of sins committed into a clear ratio by displaying the number of sins per product over the total number of products of that store.

Define each demographic factor by using quantitative arrangements to display differences in block groups.

Observe relationship between Greenwashing data scores within stores and the geographic location, featuring its demography.

Make correlation between Greenwashing data score of store and the demographic factor that influenced it in its specific block group.

IV. Results and Discussion

This research has shown a very weak correlation between demography and the amount of Greenwashing per store. Based on the recent census data I have collected and displayed on the following maps and graphs, there is no strong correlation between each demographic factor and Greenwashing score. The gray circles represent the Greenwashing score of that undisclosed pin pointed store. Figure 1 presents the Median Age per Greenville block group. This map seems to show a stronger correlation of higher Greenwashing scores associated with older age as most low scores are surrounded by areas of younger median age. However, this correlation is not strongly supported and still demonstrates room for error. Figure 1.1 displays a graph that agrees with Figure 1 and shows a stronger trend in high Greenwashing scores associated with older age. Figure 2 displays a map that seems to show a larger Greenwashing score in an area with greater population growth. In the areas with a decline in population growth or unchanging population, the Greenwashing score appears to be smaller. Again, this correlation is not fully supported by the map as well as the graph in Figure 2.1. Figure 3 presents the Median Household Income per Greenville block group. There is a slight correlation that can be seen as the Median Household Income rises, the Greenwashing score seems to be higher in those areas. Figure 3.1 directly shows this correlation. Lastly, Figure 4 and Figure 4.1 are presenting slightly different demographic factors, however, these factors demonstrate a strong connection. Figure 4 displays the unemployment rate in the Greenville county block group. There seems to be a higher Greenwashing score related to areas where unemployment is low. However, much like the other correlations, there is not a strong correlation, only a deductive hypothesis based upon a variety of data. Figure 4.1 shows the average number of educated people. This graph, like Figure 4, does not provide a sufficient correlation between Greenwashing and the demography and therefore, there is not a strong correlation between the demography in the Greenville area and the Greenwashing scores present at these particular stores.



Figure 1 Population Growth by Greenville Block Group



Figure 2 Median Household Income by Greenville Block Group



Figure 3



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Median Age by Greenville Block Group











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V. Conclusion

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Most consumers in America are unaware of what they are fully purchasing. "The eco-label should not be seen as functional and objective nor should consumers be seen as well informed and rational," (Pedersen 18). In fact, most consumers are illinformed of content contained within an eco-label and therefore, tend to be persuaded very easily in the consumer world. In a study performed in grocery stores, unlike those using mostly survey by mail or telephone, it was concluded that most women with children would pay a premium for apples with an eco-label on it. In this study, the consumers were given information on their choices and explained the function of the eco-label on their apples. This study was associated with the TFA, The Food Alliance, (Loureiro 206). Therefore, it is proven that some people will pay a little more for their food in an effort to provide safety to the environment. However, the catch is that most people are unknowledgeable about their purchases and because they are unaware of the environmental efforts placed on their food, they are undoubtedly choosing the cheaper food item. In conclusion, my research has overall proven that the demographics of an area aren't what is necessarily impacting the decisions that consumers are making when it comes down to purchasing goods, it's the lack of knowledge towards these eco-labels and environmentally-conscience products that persuade those to go with the cheaper, alternative non-ecofriendly options instead

V.I. Future Research

Further census data and analyses of Greenwashing per retail store can be collected and organized on a map document in order to show different factors that may affect the amount of Greenwashing in a certain defined area. There may be other factors present that have not been correlated to Greenwashing scores by store that could play a role in the Greenwashing as well.

VII. References/ Data Sources

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VIII. Acknowledgements

I would especially like to thank Mike Winiski for the overwhelming support and encouragement in the making of this project, as well as Dr. Stratton and Haley Jones for the research and data they have collaborated on to collect and make this project come about as a reflection of their efforts.

e	City	State	Greenwashing Fraction Ratio	Greenwashing Percent Ratio
	Greenville	SC	38/102	37.25%
	Greenville	SC	35/106	33.02%
	Greenville	sc	38/100	38%
	Greenville	sc	7/28.	25%
	Greenville	sc	25/69	36.23%
	Greenville	sc	28/49	57 1/1%
	Greenvine		20/43	57.14/0
	Greenville	SC	22/42	52.38%
	Greenville	SC	34/48	70.83%



Figure 6 – The street map of the greater Greenville city area that displays the gray circles representing each store with a calculated Greenwashing score.

Figure 5