

Instructional Resources

Editor's note: This section is a new, and experimental, addition to *The Great Lakes Geographer*. The intent is that maps, figures and diagrams developed for teaching purposes, and that are unlikely to be published as part of a research paper, can be shared among readers. We welcome submissions for this section, as well as feedback on its utility.

Market Potential Maps of Retail Sales for the United States

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The accompanying three maps of market potential based on retail sales are derived from the classic maps first shown in Harris's 1954 article in the *Annals of the Association of American Geographers*. Since the paper's initial publication, the concept of market potential has continually resurfaced in basic texts on economic geography (Dicken, 1990; Hanick, 1997, Smith et al., 1968). The geographic potential model can be viewed as an index of the possible or *potential* intensity of interaction between areas or points (Rich, 1980).

Over the years, the original 1954 maps have become quite dated. The maps presented here bring one of the original market potential maps forward using the latest available US Census retail sales data.

The potential formula used was that given in the original article. It is :

$$P_i = \sum_{j=1}^n \left(\frac{M_j}{d_{ij}} \right)$$

where P_i - market potential of county i , M_j - market of county j (as measured by retail sales), d_{ij} - distance from county i to county j . For the cases of a county paired with itself ($i=j$), the total retail sales for the county was added to the potential measure.

The only modification from the original usage is in the distance formation (d_{ij}). The square root of the spherical distance between counties was used instead of the estimates of the costs of the individual transport modes used in the original model. This is not problematic since the square root function approximates the commonly accepted relationships

between transport mode and distance. It does explain however the greater extent of high valued potential fields in the 1953 map versus the 1972 map.

Availability

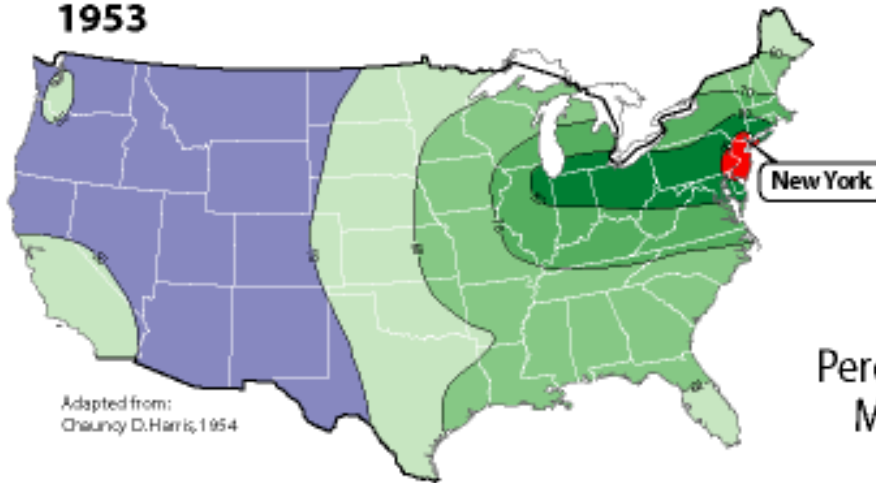
This map is also available at:

http://publish.uwo.ca/~mbgreen/market_potential.htm

References

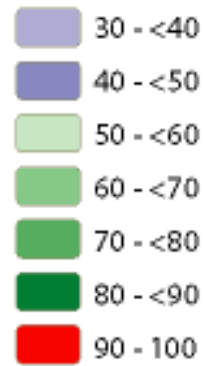
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1953

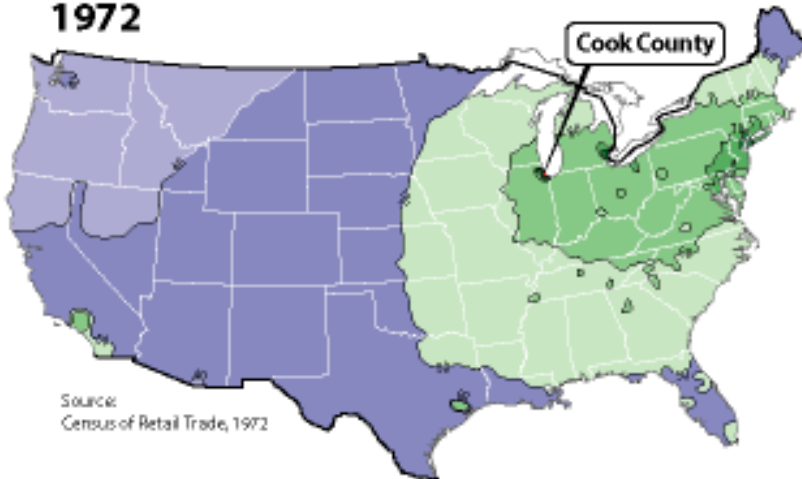


Adapted from:
Chauncy D. Harris, 1954

Percent of Maximum
Market Potential

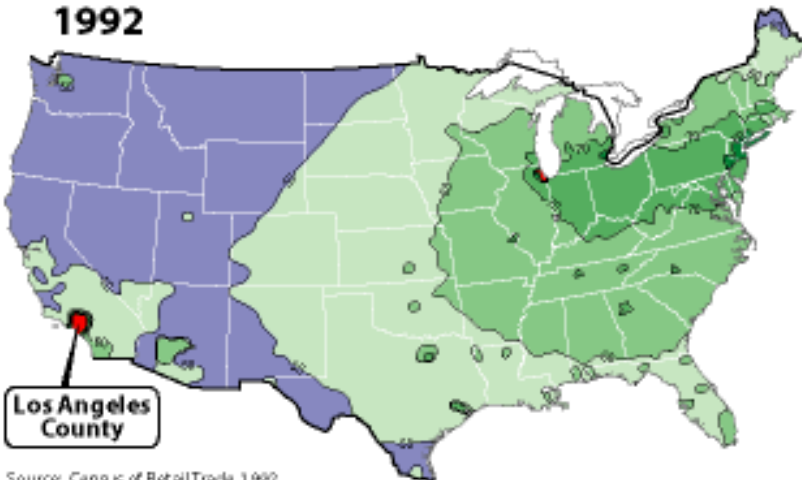


1972



Source:
Census of Retail Trade, 1972

1992



Source: Census of Retail Trade, 1992

Cartography: P.M. Chalk and D.J. Mercer. © 2000, The Cartographic Section, UWO.

Market Potential Based on Retail Sales 1953, 1972, 1992