

NIELSEN PRIZM VERSUS ESRI TAPESTRY: A COMPARATIVE ANALYSIS OF TWO CONSUMER LIFESTYLE SEGMENTATION SYSTEMS

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A key technology in micromarketing is geographic information systems (GIS), which provide marketers unparalleled access to location-based consumer information. Two leading micromarketing, GIS applications are Nielsen PRIZM and Eri Tapestry. The purpose of our study is to assess the perceived accuracy of Nielsen PRIZM and Esri Tapestry.

PRIZM and Tapestry coalesce consumer information into online interfaces, which can be used by marketers to analyze local markets in the United States. PRIZM classifies U.S. neighborhoods into 66 distinct market segments, summarizes each segment using demographic and psychographic descriptors, and identifies five common segments that reside within any given zip code. Similarly, Tapestry classifies U.S. neighborhoods into 65 market segments, summarizes each segment using demographic and psychographic descriptors, and identifies neighborhood segments that reside within a given boundary such as zip code area.

PRIZM and Esri use different databases, statistical techniques, and verification procedures to generate segmentation results. Thus, there are slight variations in both systems' analytical outputs. The following questions may arise when marketers negotiate use of both GIS applications: (1) in terms of reliability, what is the extent to which the two systems agree? (2) which one is more accurate?, and (3) why is it more accurate?. To investigate these questions, we conducted a multi-method study that involves qualitative and survey-based analyses.

We conducted an analytical overview of both PRIZM and Tapestry, followed by a series of studies examining the predictive accuracy of PRIZM and Tapestry. We reviewed the methodology and output aspects of both systems. The first aspect regards the methodology that each system uses to segment consumers: database, statistical procedures, and verification. The second aspect regards the output of each system: geographical area, consumer segments, demographic descriptors, lifestyle descriptors, and interface.

Study 1 reviews the similarity and differences on zip code coverage and focuses on the overall correlation of the top outputs of both systems. We compiled and compared PRIZM and Tapestry outputs for 1030 unique zip codes selected using a stratified systematic sampling method. This sample includes 5-digit zip codes that start from 01 to 99. To determine how similar the two sets of outputs are to one another, a nonlinear canonical correlation analysis is conducted on the top three segments of PRIZM with those of Tapestry.

As a measure of the extent of agreement between the two systems, we computed the Uncertainty Coefficient that measures the proportional reduction in error when the top segment output of PRIZM in each zip code is used to predict the same of Tapestry, and vice versa. We also use the Contingency Coefficient to measure the statistically relationship between the output of top segments from PRIZM and Tapestry.

Study 2 surveyed individuals/households for their perceived accuracy of the top outputs of both systems. This study uses a convenient sample of 380 respondents who live in 154 different zip codes. A 26-item questionnaire that measures the perceived accuracy of PRIZM and Tapestry was developed based on the dimensions identified in the analytical overview section above. Respondents were asked to rate on 7-point Likert scales, the overall accuracy of PRIZM and Tapestry's segments, the accuracy of demographic and lifestyle descriptors, and the overall design of each system's user interface.

Study 3 analyzed contents of the respondents' reflective reasoning and stories of how one system better described the respondent households of Study 2. Responses were coded to identify dimensions shared by both PRIZM and Tapestry. In the spirit of grounded theory, survey text was deconstructed into codes. Individual codes were aggregated to form higher order categories, and researchers investigated the relationship of the higher order categories through reflective thinking and writing.