The Local Composite Index:
A Critical Analysis

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(ABSTRACT)  

The purpose of this study was to develop an explanation for the volatile behavior of the Local Composite Index, Virginia's measure of public school division fiscal capacity. This study documented and analyzed the behavior of the mathematical and structural components of the current formula over the period inclusive of Biennia 1984-86 through 1996-98. It was implemented in five phases:  

1. Literature Review. Literature related to public school division fiscal capacity was reviewed:  
   a) To identify normative and procedural concepts important to the philosophical development of fiscal capacity.  
   b) To delineate the various models used across the United States in the determination of public school fiscal capacity.  
   c) To examine components of indices, their application, and criteria for evaluating their behavior.  

2. Local Composite Index Review. Information was collected from various sources regarding the Local Composite Index and its components for all school divisions in the Commonwealth.  

3. Database Development. A relational database was developed to facilitate exploratory trend analyses of the LCI and its components.  

4. Analysis. An identification and analysis of three trends was selected, defined, and undertaken:  
   a) Biennial Change Rate of the Indicators, Local and State  
   b) Biennial Change Rate of the Standardized Indicators, Local and State
c) Net Biennial Change Rate of the Local to State Ratio for the Standardized Indicators

5. Case Studies. Five case studies of public school divisions and the Commonwealth of Virginia were performed to provide an in-depth and quantitative analysis of the interaction of the various component trends of the Local Composite Index and their resultant effects.

The study identified specific phenomena and their percentage contribution to the volatility of the Local Composite Index. The study found three interactive effects of the LCI ratio structure that contribute to its volatility:

- The Ratio structure can enhance the LCI value.
- The Ratio structure can dampen the LCI value.
- The ratio structure allows for Synthetic Change within the Local or State Standardized Indicators, which stimulates unpredictable patterns of volatility.