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Title	Conceptualization and Measurement of Energy Index (EI) in the South Asian Context
Abstract	<p>The extant literature largely accounts for energy use through a single variable, either primary energy consumption or total energy use or fossil fuel consumption. There are hardly any studies that attempt to capture the impact of energy for a country or group of countries through an energy index which would serve as an aggregate and composite measure of energy consumption. Greater energy use is invariably positively associated with a higher rate of economic growth; hence it would be of interest to examine the patterns of energy use amongst emerging developing economies. For this purpose, this study has chosen South Asia as a region consisting of Bangladesh, India, Nepal, Pakistan and Sri Lanka. The idea is to fill the lacuna in the extant literature by conceptualizing an index of energy use (EI) for South Asia over the time period 1990-2012 by employing Principal Component Analysis. The main research questions are (i) what is the importance of energy consumption in the context of sustainable economic development? (ii) what are the methodological issues in measurement of energy use? (iii) which approach is appropriate for construction of an EI? (iv) what are the implications of studying EI in the South Asian context? (v) do intra-regional differences affect EI?</p> <p>Through tools such as descriptive statistics and growth analysis</p>

	<p>based on piecewise linear regression and semi-log equations with dummy variables, we undertake an analysis of the pattern of growth in EI across the five South Asian economies. Subsequently, through a decomposition of growth rate of aggregate energy use into growth rate of per capita energy use and growth rate of population, we draw inferences about behavioral differences, if any, amongst the chosen countries.</p> <p>We find significant differences in terms of mean energy consumption and the volatility of energy consumption in South Asia. We establish that inordinate energy consumption cannot be inevitably associated with a dominant large country like India; thereby disregarding the populist notion that ‘size is all’ when it comes to explaining the pattern of energy consumption in South Asia. We further establish that there are inter se differences in the attitude of population towards energy conservation. Given the fact that South Asian economies are experiencing similar patterns of population growth, the differences in growth rates of per capita energy consumption could largely be attributed to behavioral differences amongst the five South Asian nations.</p>
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