

# **Regional Disparities in Economic Development : An Inter-District Empirical Study of the State of West Bengal**

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The present study seeks to modify the Kendall's method for constructing index of economic development from various socio-economic indicators. The modified index has been used to compare sectoral as well as overall economic development of West Bengal and also to focus on the pattern of inter-district variations over time.

## **1 Introduction.**

Problems of regional analysis in terms of a large number of indicators of development are acute since the question of objectivity arises in combining the selected indicators. In case of one indicator, ranking among the spatial units is done on the basis of the value of the indicator. Thus, identification of advanced and backward regions does not pose any serious problem when, for instance, per capita income is taken as an indicator for measuring spatial disparities. For regionalisation a composite index is to be constructed from the variety of chosen socio-economic indicators as the index value represents level of development.

For a meaningful and comparable composite index of development, it is desirable to assign weights to the indicators by adopting a method giving importance to the variation of the indicators over the spatial units and thereby minimising arbitrariness in choosing weights. One such technique is the Principal Component Analysis (PCA) which is used in the delineation of meaningful regions, and in other facets of regional analysis. Although PCA is a powerful tool for regionalisation, it is not as objective as it is claimed. Subjectivity is involved at various steps, from the choice of relevant indicators to fixing the number of factors deemed appropriate.<sup>1/</sup>

One of the main objectives of PCA is to reduce the dimensionality of a data set which consists of a large number of inter-related variables, while retaining as much as possible the variation in the data set. The data set is transformed to a new set of orthogonal variables. The first few orthogonal variables or the components represent maximum variation present in all the original variables. The first principal