

MA Semester III (2019-2021)

PG Department of Geography, Patna University

Paper- CC10, Unit-I

Niharika Narayan

Assistant Professor (Guest)

Email Id- [narayanniharika@gmail.com](mailto:narayanniharika@gmail.com)

## **Merits and Demerits of Quantitative Techniques in Geography**

The Quantitative Revolution (QR) was a paradigm shift that sought to develop a more rigorous and systematic methodology for the discipline of geography. It came as a response to the inadequacy of regional geography to explain general spatial dynamics. The main claim for the quantitative revolution is that it led to a shift from a descriptive (idiographic) geography to an empirical law-making (nomothetic) geography. The quantitative revolution occurred during the 1950s and 1960s and marked a rapid change in the method behind geographical research, from regional geography into a spatial science.

In the history of geography, the quantitative revolution was one of the four major turning-points of modern geography – the other three being environmental determinism, regional geography and critical geography).

### **Advantages-Disadvantage of Quantitative Techniques:**

### **Advantages of Quantitative Techniques:**

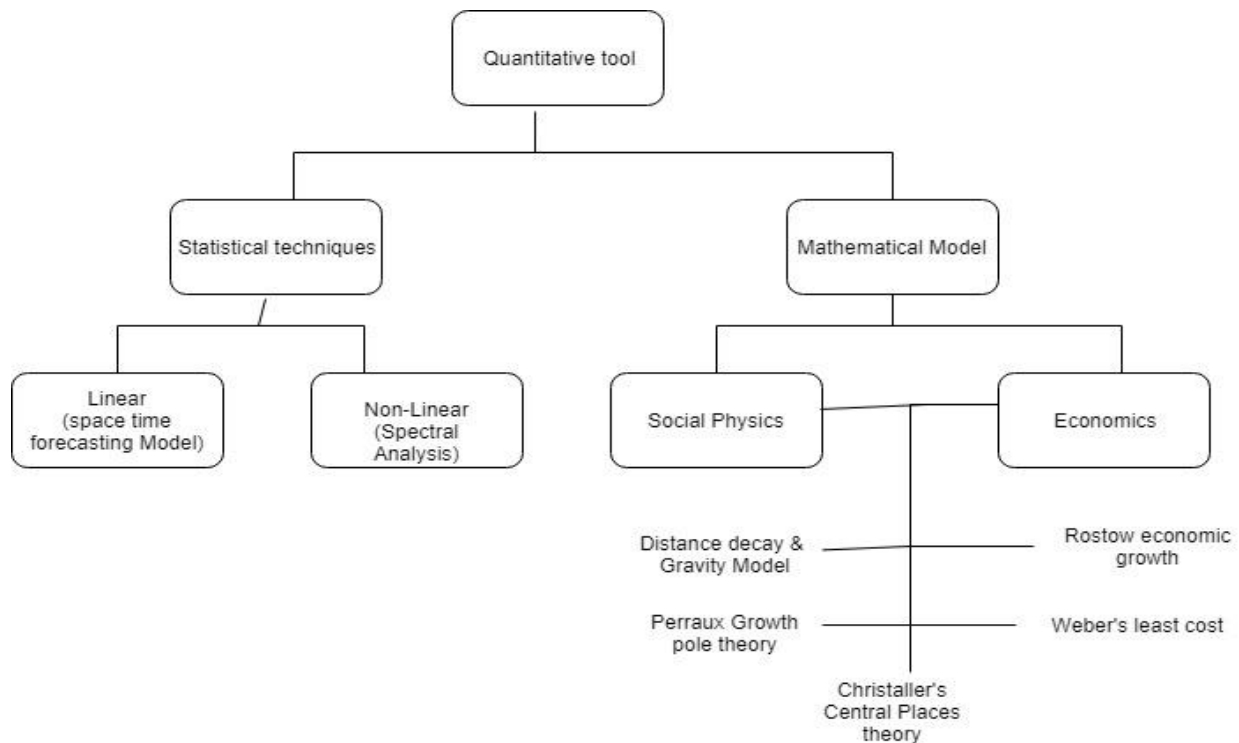
- (i) All the techniques are firmly based on empirical observations and are readily verifiable.
- (ii) They help in reducing a multitude of observations to a manageable number of factors.
- (iii) They allow the formulation of structured ideas and theories which can be tested under the assumed conditions.
- (iv) They help in deriving suitable models to understand the interaction of the evolved factors and their process within the models and with reference to observed facts.
- (v) They help in identifying tendencies and desired trends, laws and theoretical concepts.

#### **Disadvantages of Quantitative Techniques:**

- (i) The theories and models developed on the basis of empirical data, do not take into account the normative questions like beliefs, emotions, attitudes, desires, hopes and fears and, therefore, cannot be taken as the tools explaining exact geographical realities.
- (ii) The over-enthusiastic preachers have sacrificed many good qualitative statements which were quite useful.
- (iii) They also demand sophisticated data which are rarely attainable outside the developed countries.
- (iv) It has been found that generalisation done with the help of these techniques is bringing exaggerated results.
- (v) The factorial designs depend on the use of the costly computer time and considerable financial assistance which are rarely available to the individual researcher of areal variation.

Generalisation on the basis of quantitative techniques may prove to be misleading and negative instead of positive. Apart from this, the data used is hardly for a period of about hundred years and that too reflects the modes of production and distribution of the developed societies. Thus,

the Quantitative Revolution also could not enable the geographers to formulate the universal laws and paradigms.



### **Resurgence of Quantitative geography**

During the 1990s, quantitative geography experienced a resurgence. The primary motivation for the resurgence was the expansion of geotechnical applications, such as-

- Geographic Information Systems (GIS),
- The Global Positioning System (GPS), and
- Remote Sensing and the growing dominance of geotechniques.