Modern economics have the nature of quantity and have adopted empirical studies widely. Statistics is keen to devise ways to provide research access to modern economics. This paper seeks to review and clarify the role of statistics in the methodology perspective of economic analysis. Although the methods of econometrics are now well established in statistical literature, the application of these methods has posed us with considerable challenges considering the peculiarities of economic data and the time-variant of economic system. This presentation will show how these economic properties invalidate many of the common statistical approaches used in economic analysis and introduce the recent work to overcome them. It also highlights statistical adequacy as a primary criteria in econometrical models evaluation.

**Keywords:** econometrics, economic change, economic data, statistical adequacy