



Comparing regression curves: an L^1 -point of view

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Abstract

In this paper, we compare two regression curves by measuring their difference by the area between the two curves, represented by their L^1 -distance. We develop asymptotic confidence intervals for this measure and statistical tests to investigate the similarity/equivalence of the two curves. Bootstrap methodology specifically designed for equivalence testing is developed to obtain procedures with good finite sample properties and its consistency is rigorously proved. The finite sample properties are investigated by means of a small simulation study.

Keywords Equivalence testing · Comparison of curves · Bootstrap · Directional Hadamard differentiability

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