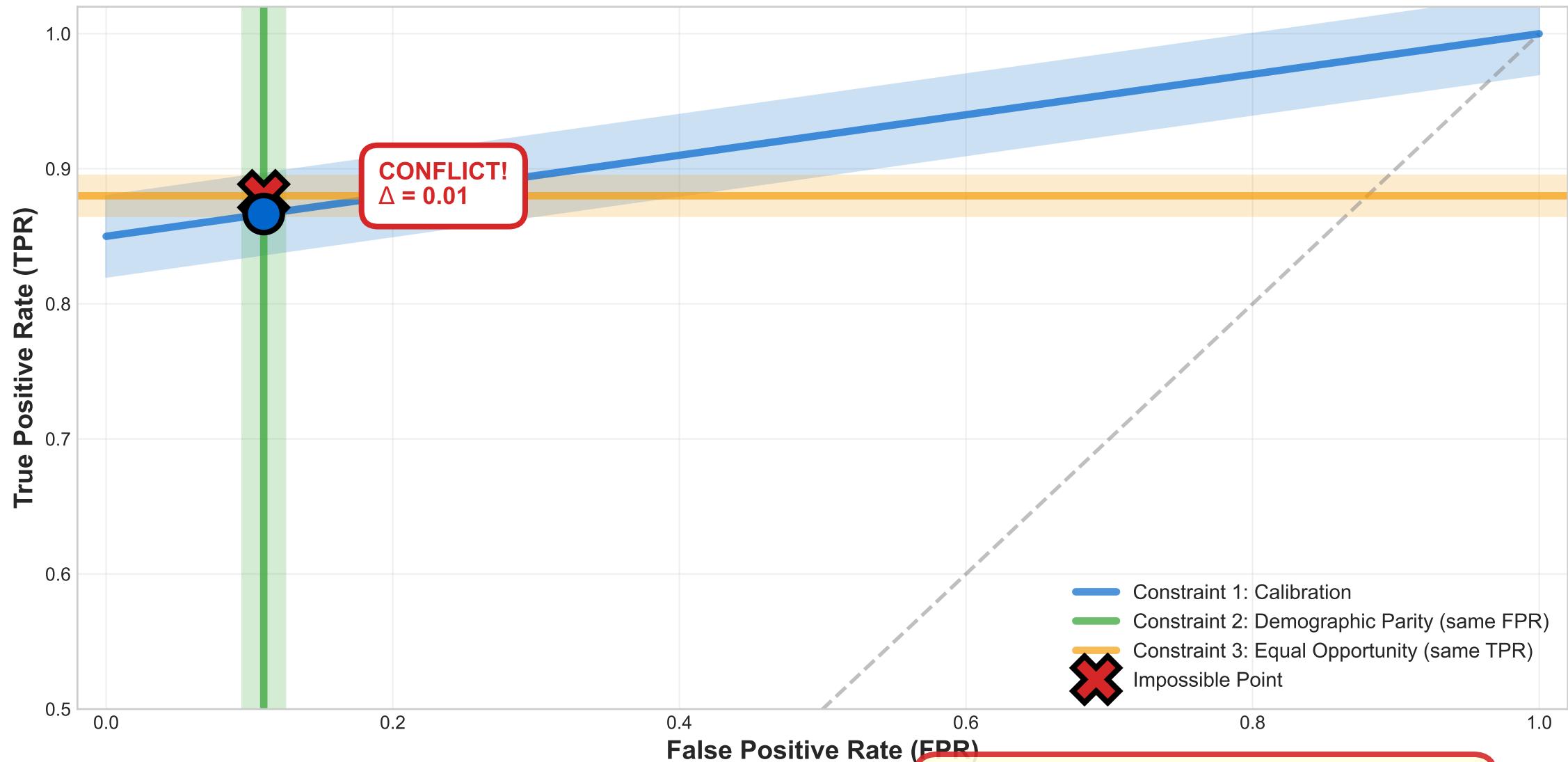


Impossibility Theorem: Why You Cannot Satisfy All Fairness Metrics



Chouldechova Impossibility Theorem:

3 Constraints (Calibration, DP, E0)
2 Degrees of Freedom (x, y in ROC space)

3 equations, 2 unknowns
= Overdetermined system
= NO SOLUTION when base rates differ