**Supplemental Materials for ‘Establishing causality in the mediator-outcome relationship: Experimental mediation and the use of instrumental variable regression’**

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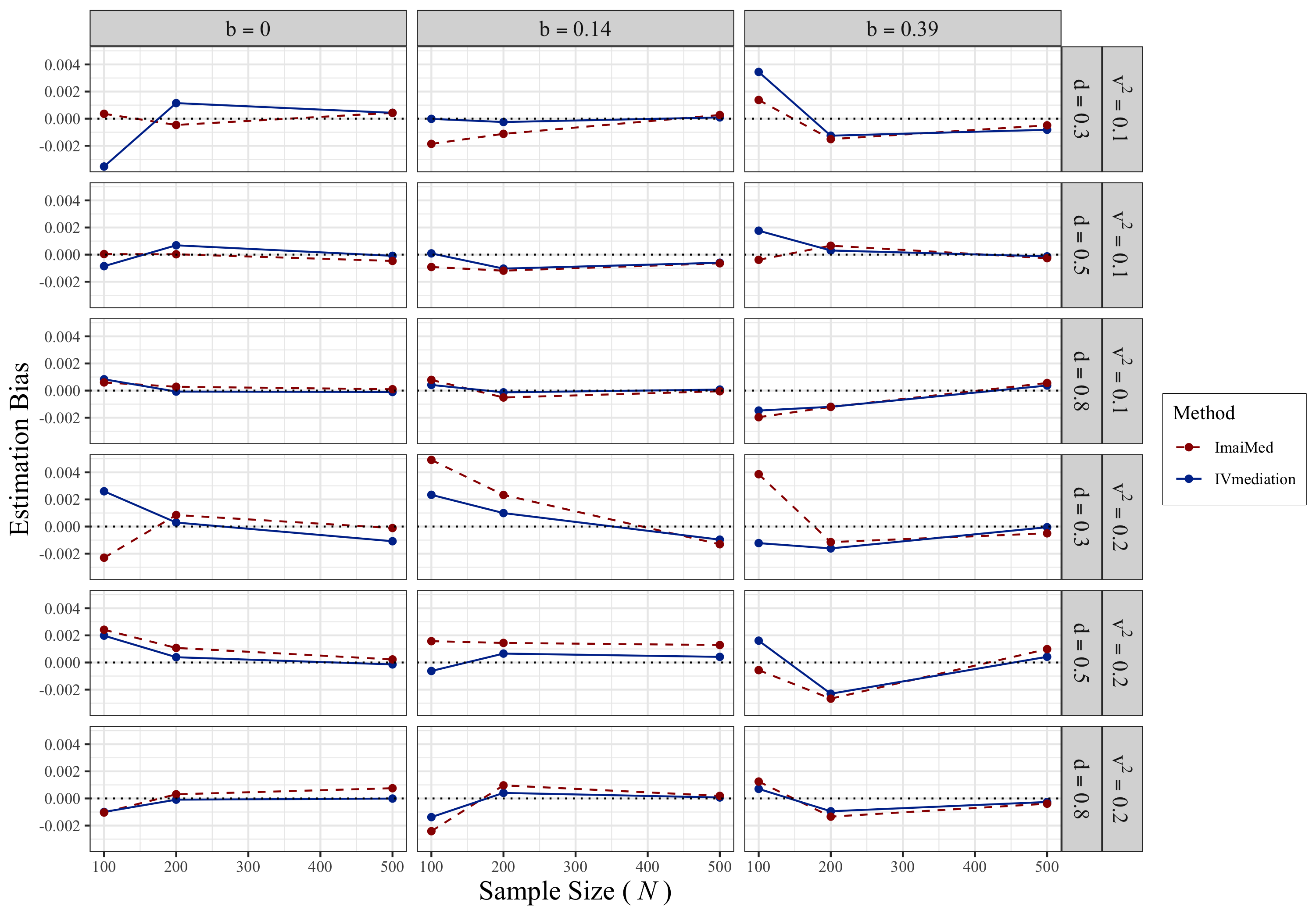
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# S1 Additional Results under Normality Assumptions

## S1.1 Estimation Bias of the Indirect Effect

**Figure S1.**

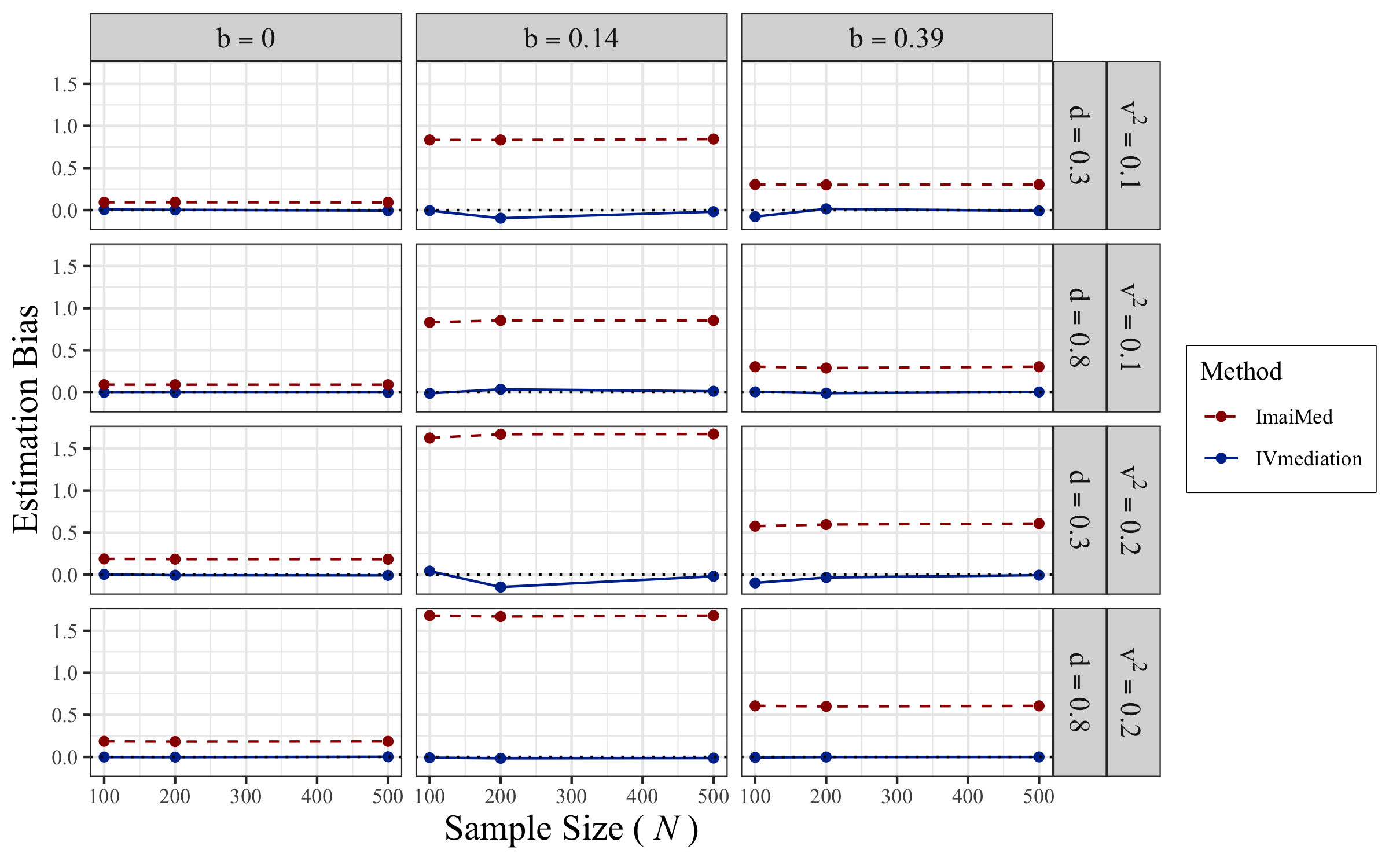
*Estimation Bias of the Indirect Effect When Under Normality Assumptions*



*Note.* The horizontal black dotted line marks 0 Estimation Bias.

**Figure S2.**

*Estimation Bias of the Indirect Effect When Equaled and with Under Normality Assumptions*

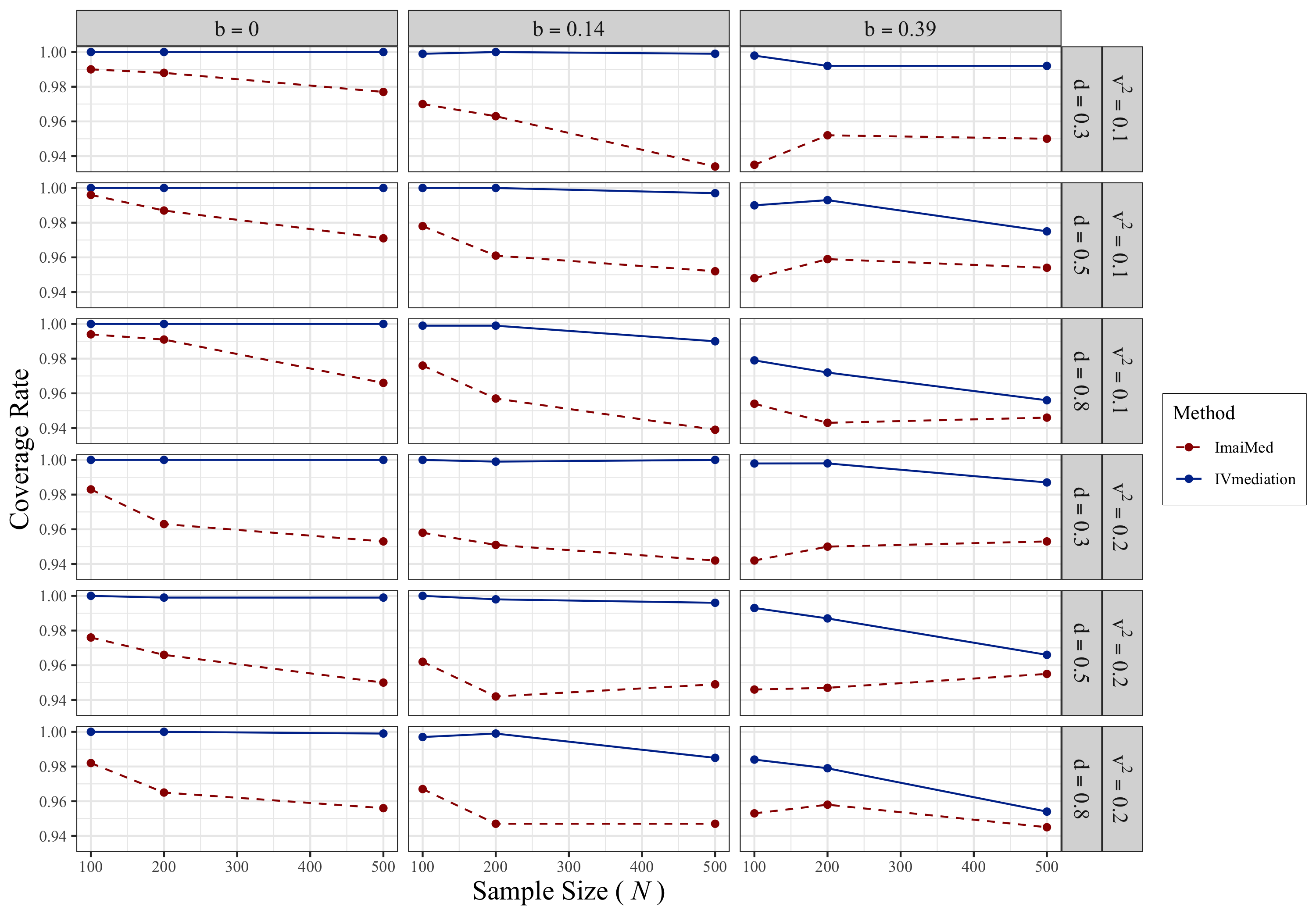


*Note.* The horizontal black dotted line marks 0 Estimation Bias.

## S1.2 Coverage Rate of the Indirect Effect

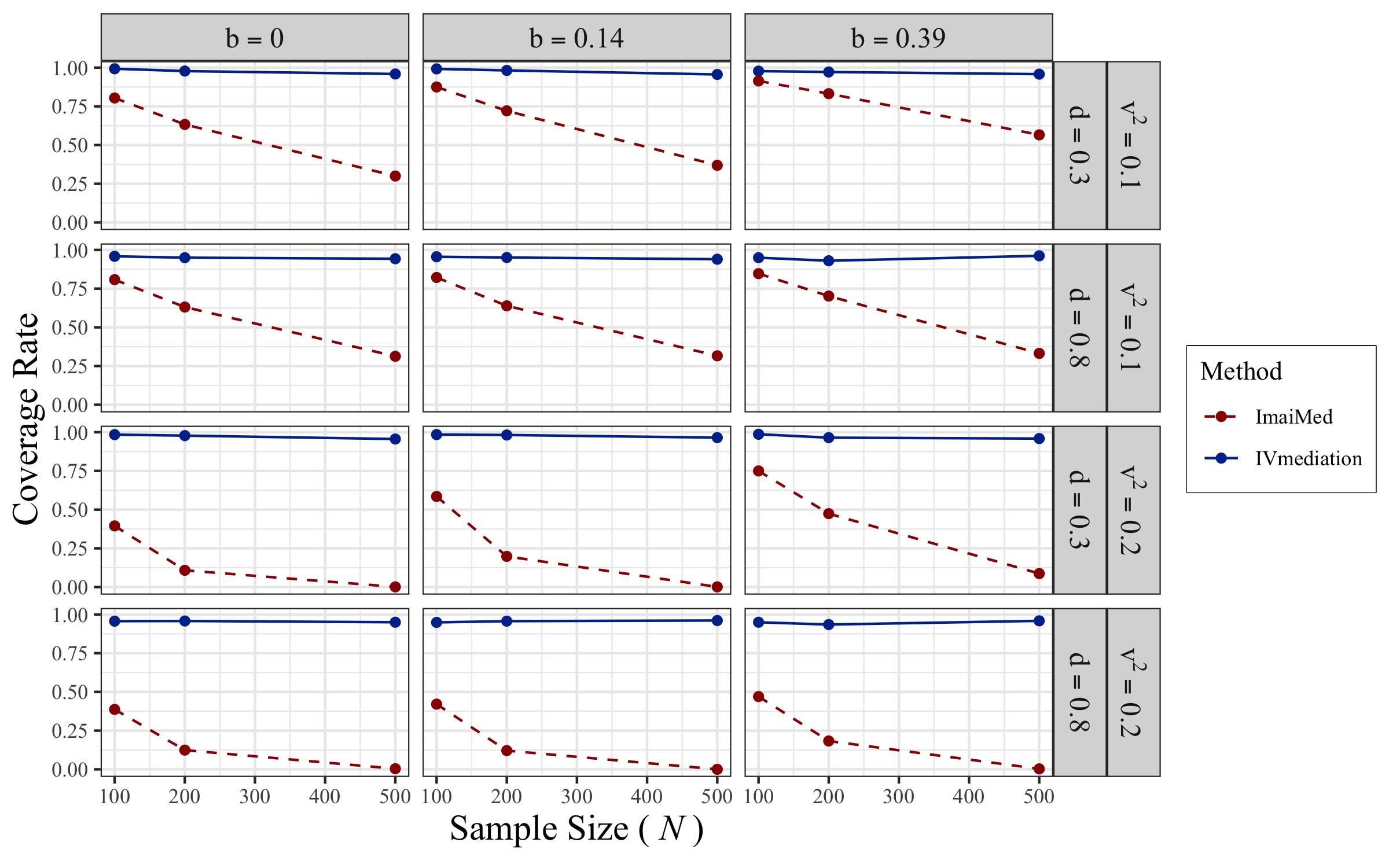
**Figure S3.**

*Coverage Rate of the Indirect Effect When Under Normality Assumptions*



**Figure S4.**

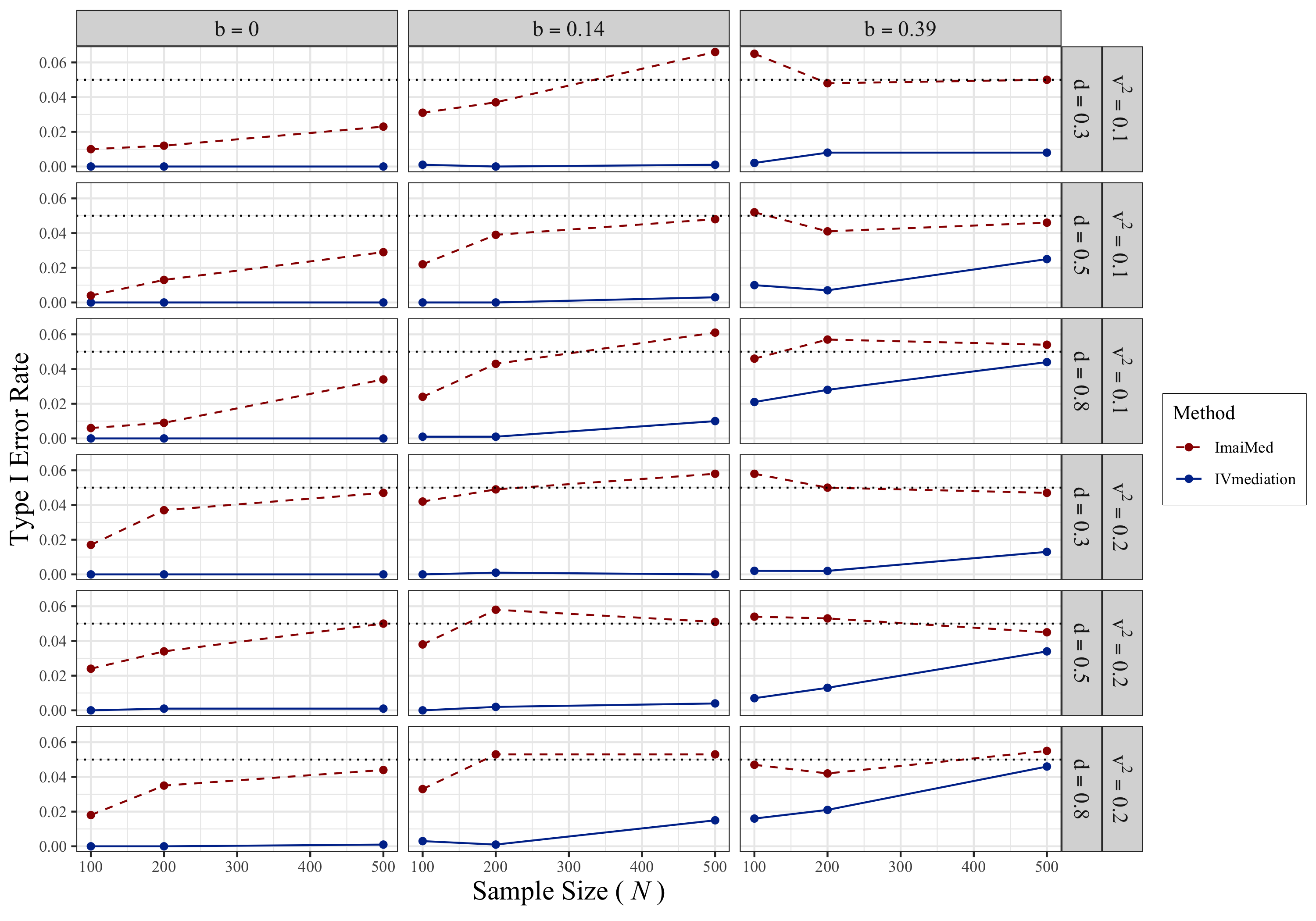
*Coverage Rate of the Indirect Effect When Equaled and with Under Normality Assumptions*



## S1.3 Type I Error Rate of the Indirect Effect When and

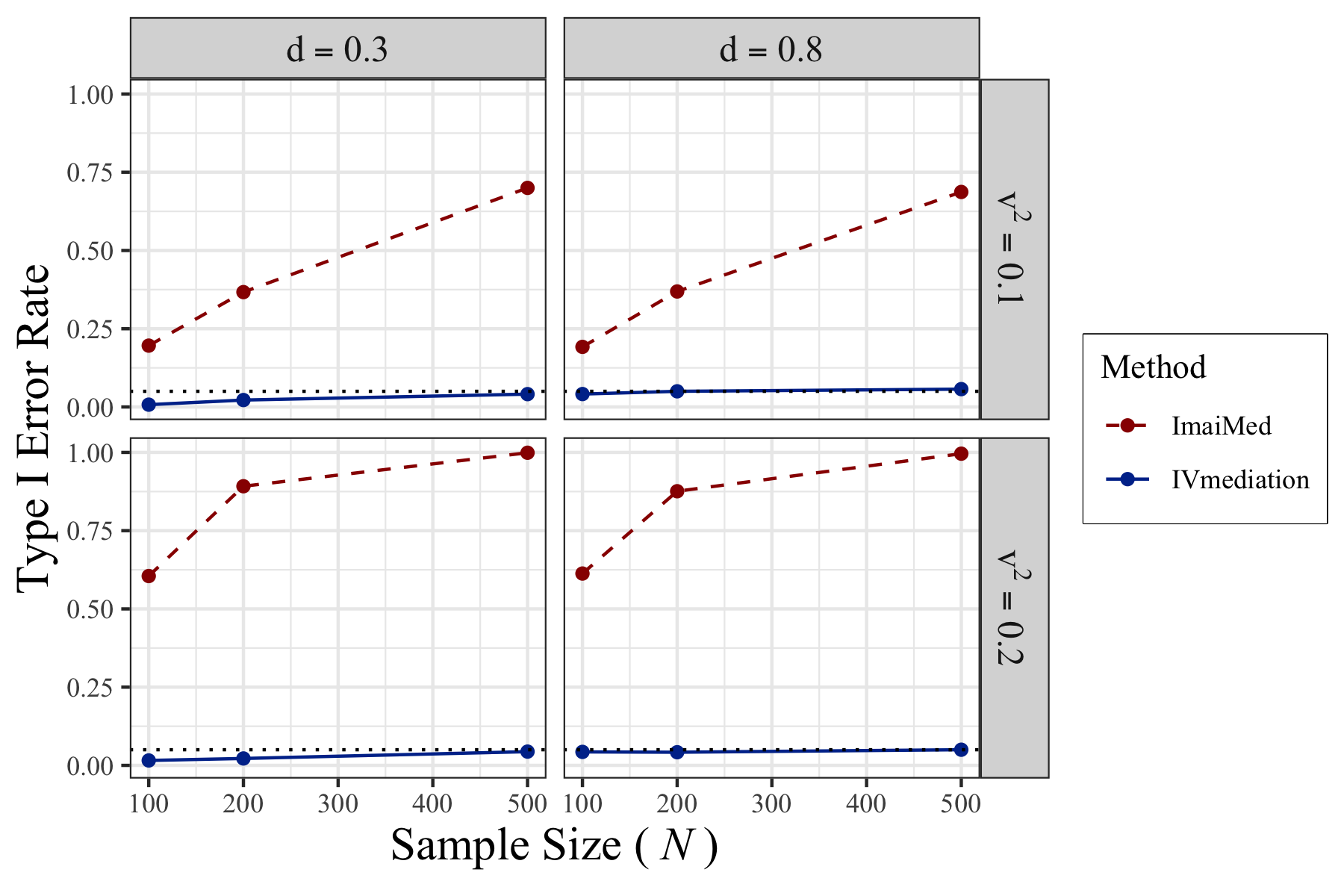
**Figure S5.**

*Type I Error Rates of the Indirect Effect When Under Normality Assumptions*

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**Figure S6.**

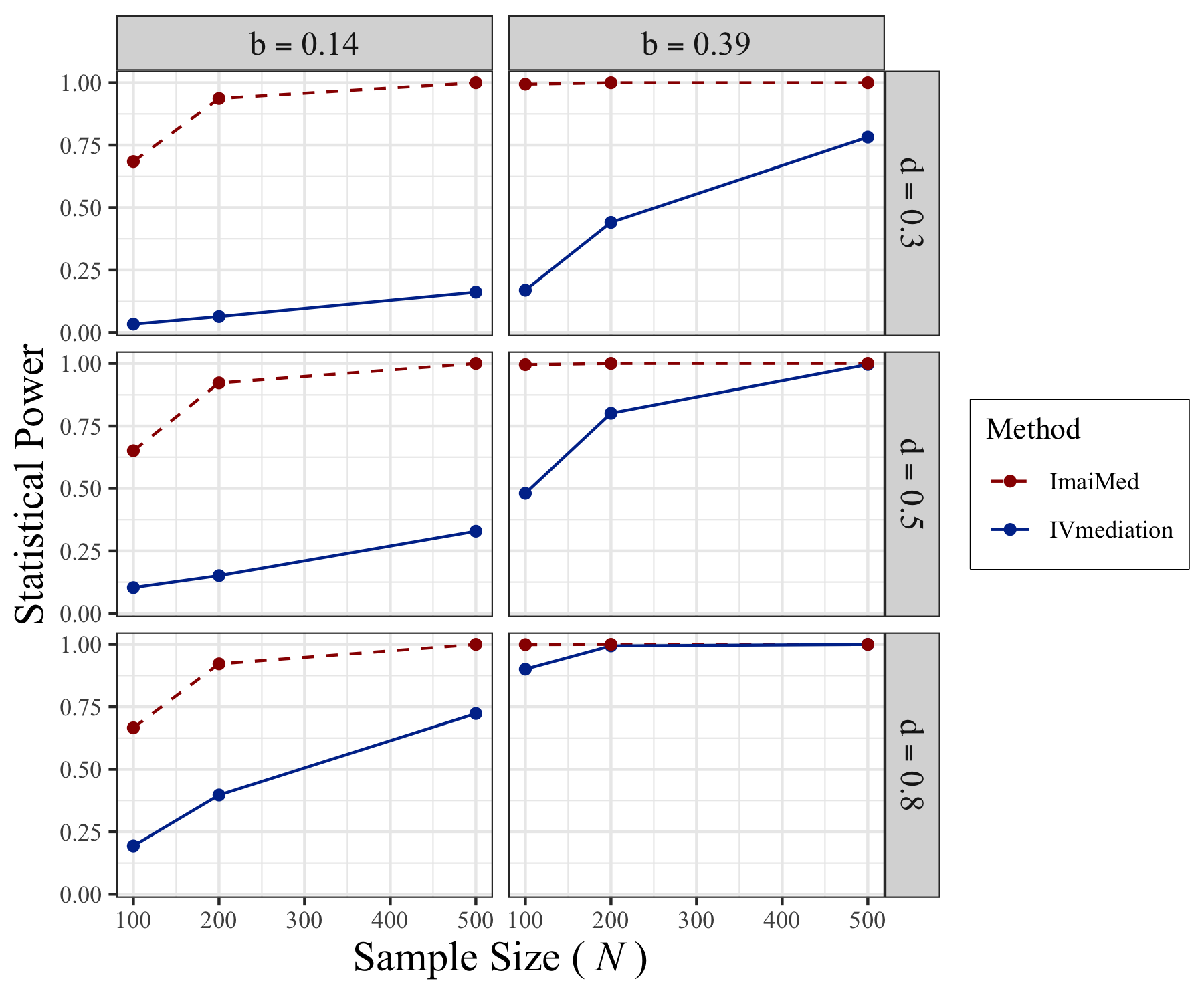
*Type I Error Rates of the Indirect Effect When Equaled and with Under Normality Assumptions*



S1.4 Statistical Power of the Indirect Effect When

**Figure S7.**

*Statistical Power of the Indirect Effect When* *Under Normality Assumptions*

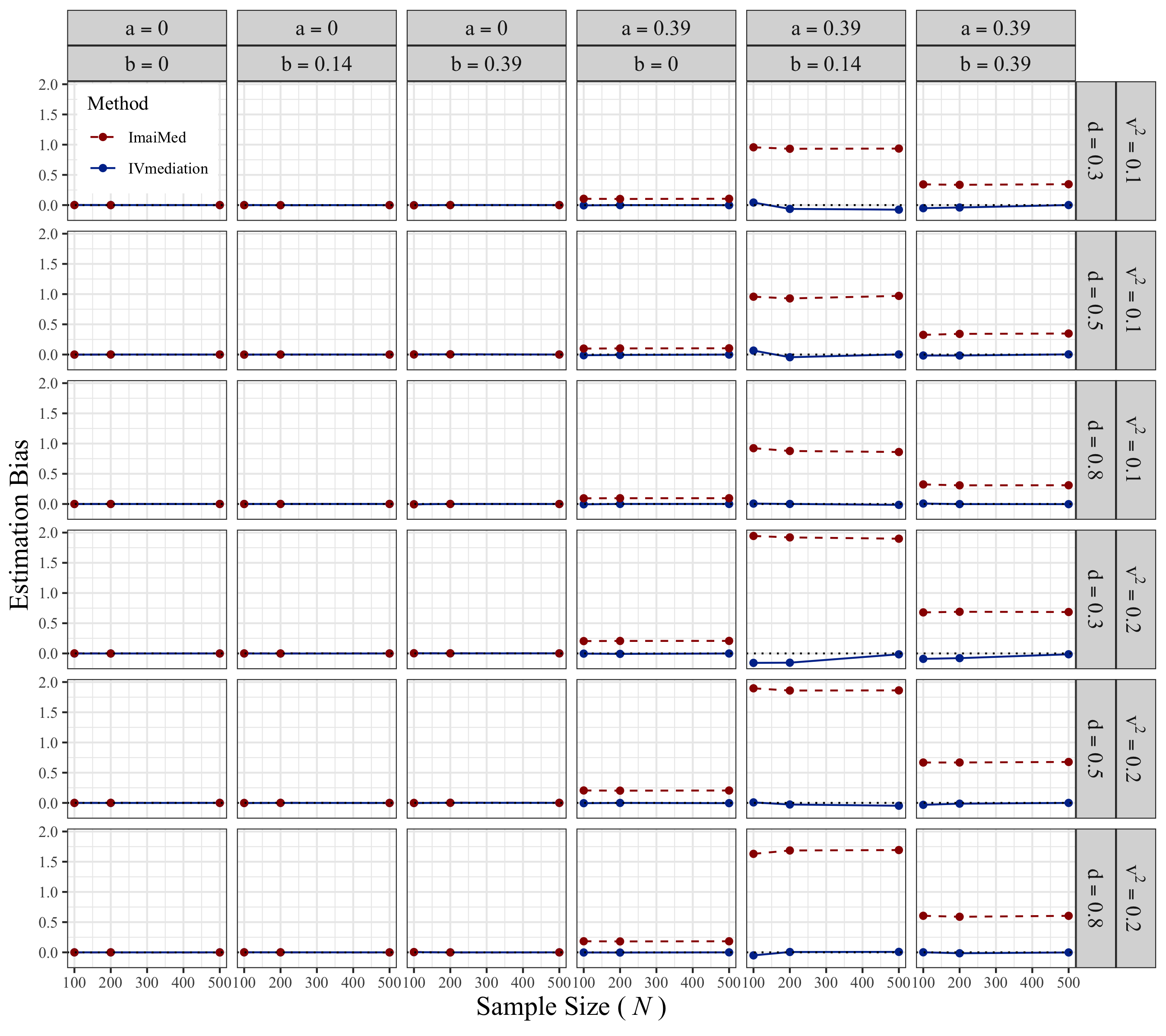


# S2 Results under The Asymptotically Distribution Free (ADF) Assumptions

## S2.1 Estimation Bias of the Indirect Effect

**Figure S8.**

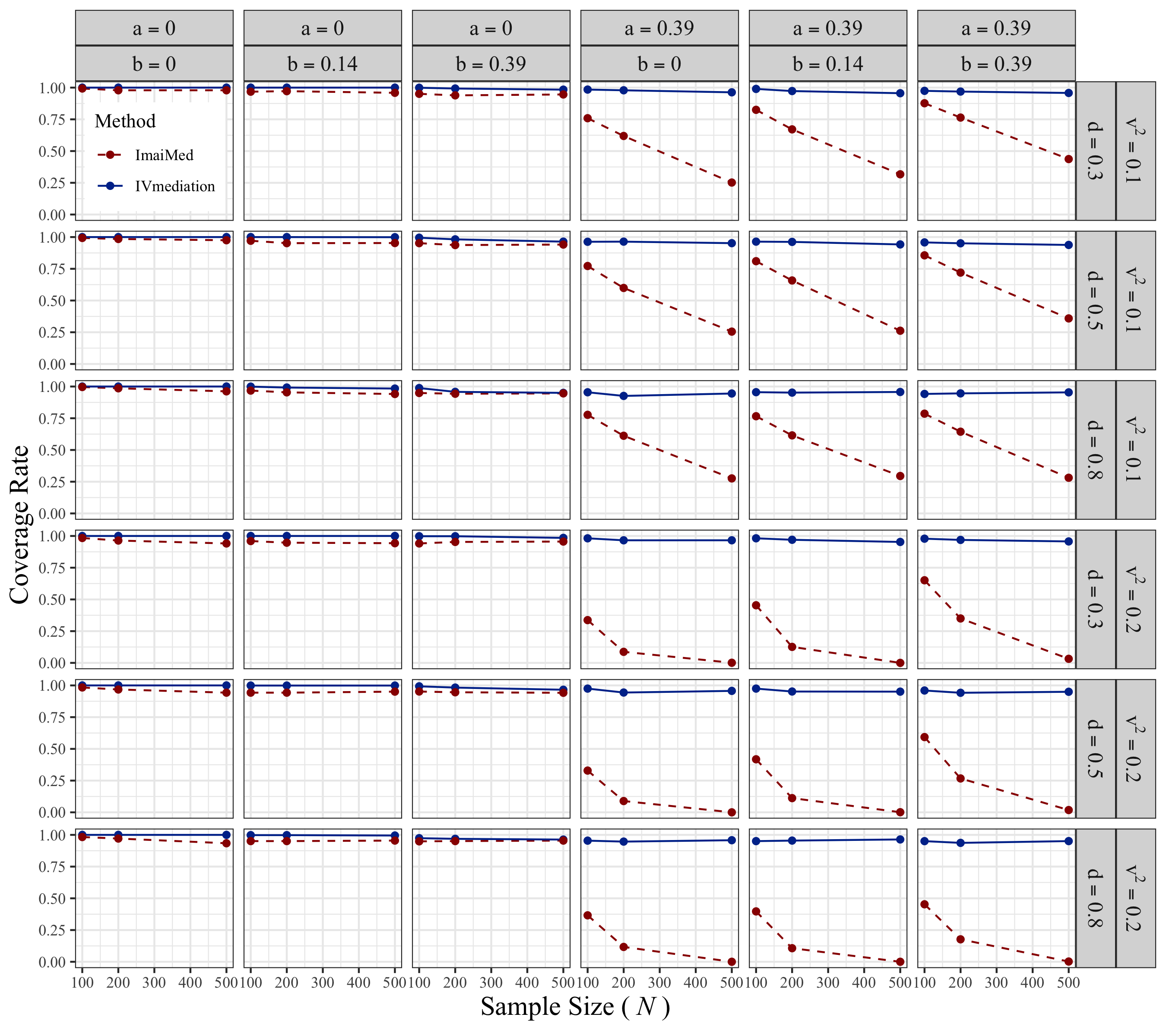
*Estimatino Bias of the Indirect Effect under ADF Assumptions*

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## S2.2 Coverage Rate of the Indirect Effect

**Figure S9.**

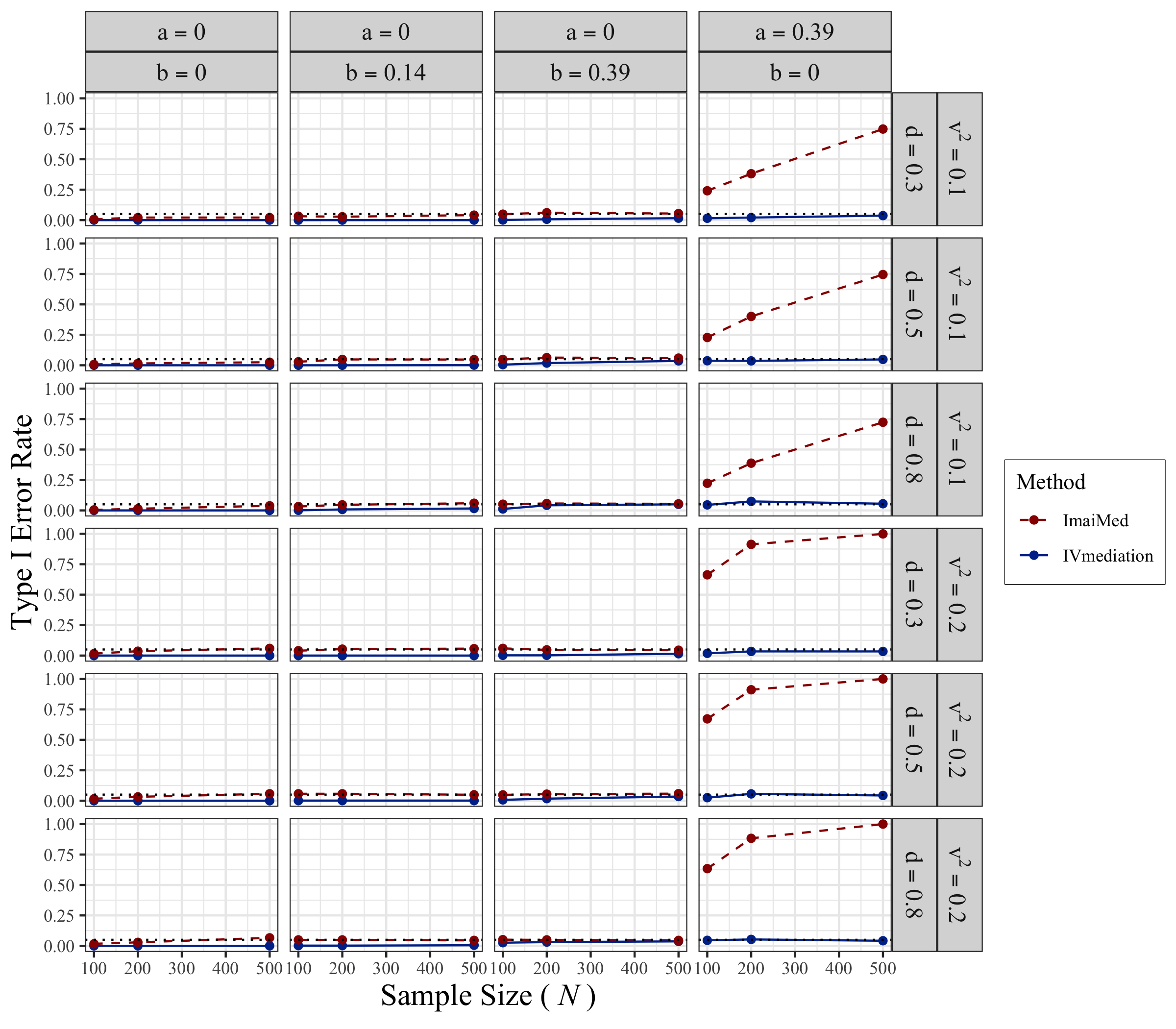
*Coverage Rate of the Indirect Effect under ADF Assumptions*



## S2.3 Type I Error Rate of the Indirect Effect

**Figure S10.**

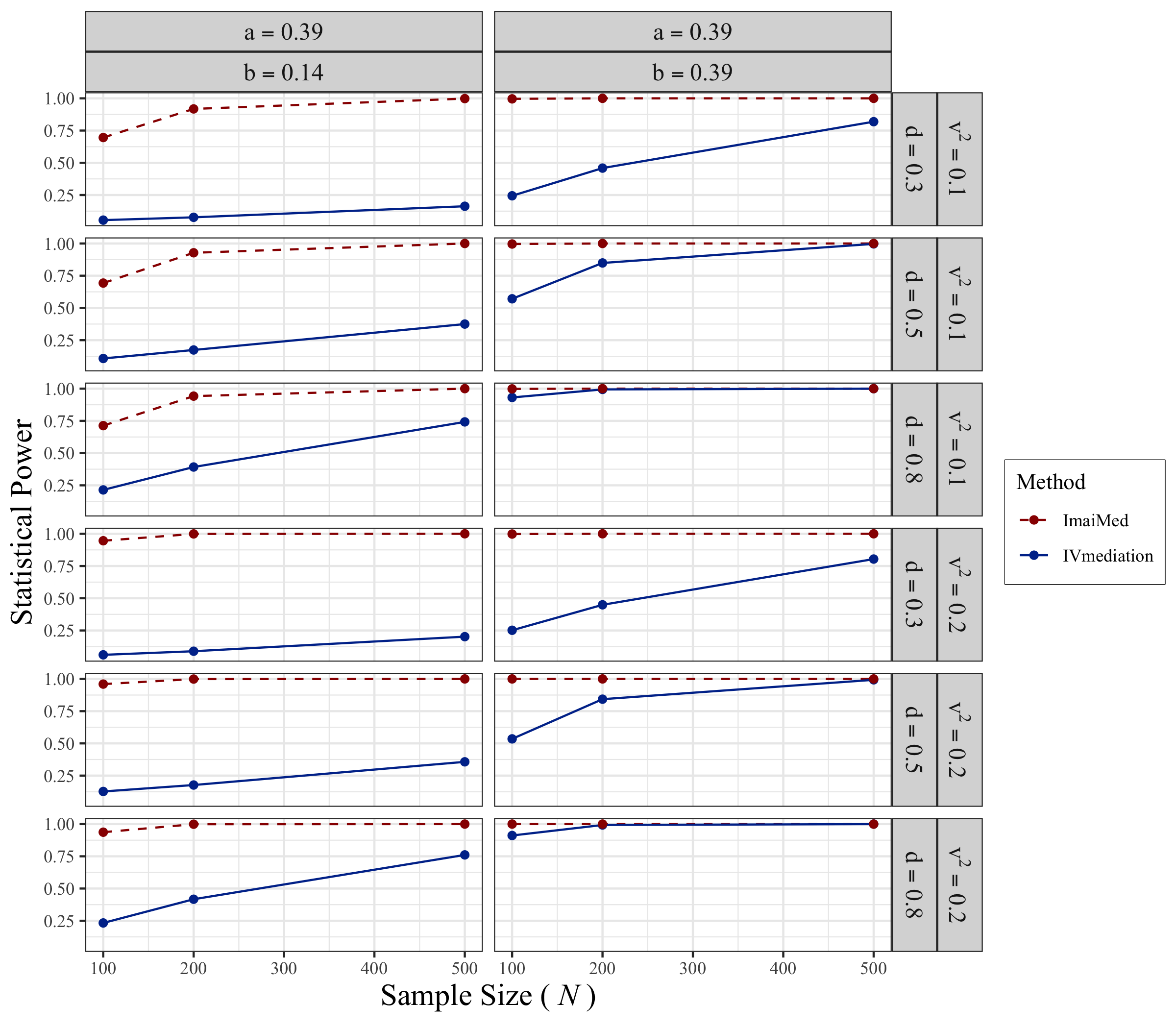
*Type I Error Rate of the Indirect Effect under ADF Assumptions*

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## S2.4 Statistical Power of the Indirect Effect

**Figure S11.**

*Statistical Power of the Indirect Effect under ADF Assumptions*

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