Corrigendum to “Fixed effects and random effects estimation of higher-order spatial autoregressive models with spatial autoregressive and heteroskedastic disturbances.”

(WU Economics Working Paper, No 173, April 2014)

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September 2016

We are grateful to Di Liu for pointing out two errors in the definition of the matrices $A_{1,N}^s$ and $A_{3,N}^{s'}$, appearing in the quadratic form of the moment conditions in equations (12a) and (12c).

In equation (12a), the correct definition of matrix $A_{1,N}^s$ is

$$A_{1,N}^s = Q_{0,N}(I_T \otimes M_{s',N}^r M_{s,N}) - \text{diag}_{s=1}^{NS}(Q_{0,N}(I_T \otimes M_{s',N}^r M_{s,N})_{ss}).$$

In equation (12c), the correct definition of matrix $A_{3,N}^{s'}$ is

$$A_{3,N}^{s'} = Q_{0,N}(I_T \otimes M_{s',N}^r M_{s,N}) - \text{diag}_{s=1}^{NS}(Q_{0,N}(I_T \otimes M_{s',N}^r M_{s,N})_{ss}).$$

The definition of the GM estimator (equations (13)-(18)) does not make use of the matrices $A_{1,N}^s$ and $A_{3,N}^{s'}$ and remains unchanged. The only consequential error appears in the derivation of the variance-covariance matrix of the GM estimator, where the matrices $A_{1,N}^s$ and $A_{3,N}^{s'}$ enter through equation (22) and show up ultimately in the definition of the blocks of the matrices $\bar{A}_{1,N}^s$ and $\bar{A}_{3,N}^{s'}$ in equations (26a)-(26d).

In equation (26a), the correct definitions of the blocks of matrix $\bar{A}_{1,N}^s$ are

$$\bar{A}_{1,N}^s = \frac{1}{2(T-1)} [A_{1,N}^s + (A_{1,N}^s)^t],$$

$$\bar{A}_{1,N}^{s',v}_{1,p,N} = -\frac{1}{(T-1)} (e_T^r \otimes I_N) \text{diag}_{s=1}^{NT}(Q_{0,N}(I_T \otimes M_{s',N}^r M_{s,N})) (e_T \otimes I_N),$$

$$\bar{A}_{1,v,N}^{s,t}_{1,N} = -\frac{1}{(T-1)} \text{diag}_{s=1}^{NT}(Q_{0,N}(I_T \otimes M_{s',N}^r M_{s,N})) (e_T \otimes I_N).$$

In equation (26c), the correct definitions of the blocks of matrix $\bar{A}_{3,N}^{s'}$ are

$$\bar{A}_{3,N}^{s'} = \frac{1}{2} [Q_{1,v}(I_T \otimes (M_{s',N}^r M_{s,N} + M_{s,N}^r M_{s',N})) Q_{1,v} - 2 \text{diag}_{s=1}^{NT}(Q_{1,v}(I_T \otimes (M_{s',N}^r M_{s,N})))]$$

or

$$\bar{A}_{3,v,N}^{s',v}_{1,p,N} = \frac{1}{2} [T(M_{s',N}^r M_{s,N} + M_{s,N}^r M_{s',N}) - 2(e_T^r \otimes I_N) \text{diag}_{s=1}^{NT}((Q_{1,v}(I_T \otimes (M_{s',N}^r M_{s,N})))(e_T \otimes I_N))],$$

$$\bar{A}_{3,v,N}^{s,t}_{1,N} = \frac{1}{2} [\{e_T \otimes (M_{s',N}^r M_{s,N} + M_{s,N}^r M_{s',N})\} - 2 \text{diag}_{s=1}^{NT}((Q_{1,v}(I_T \otimes (M_{s',N}^r M_{s,N})))(e_T \otimes I_N))].$$