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<b>Report No.</b>	HIAS-E-72
<b>Title</b>	Identifying Factor-Augmented Vector Autoregression Models via Changes in Shock Variances
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<b>Issued Date</b>	August 2018
<b>Abstract</b>	We propose a new method for the structural identification of a dynamic causal relationship in factor-augmented vector autoregression models based on changes in the unconditional shock variances that occur on a historical date. The proposed method can incorporate both observed and unobserved factors in the structural vector autoregression system and it allows the contemporaneous matrix to be fully unrestricted. We derive the asymptotic distribution of the impulse response estimator and consider a bootstrap inference method. Monte Carlo experiments show that the proposed method is robust to the misspecification of the contemporaneous matrix unlike the existing methods. Both the asymptotic and bootstrap methods obtain a satisfactory coverage rate when the shock of an observed factor is studied, although the latter is more accurate when the shock of an unobserved factor is considered. An empirical example based on the same data employed by Bernanke et al. (2005) provides similar point estimates and somewhat wider confidence intervals, thereby supporting their identification strategy.
<b>Keywords</b>	dynamic causal effect, factor-augmented vector autoregression, identification through heteroskedasticity, impulse response
<b>JEL</b>	C14, C22

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