Figure S1. Decomposition analysis results of changes in air pollutants and CO₂ emissions. The change in 2010–2017 emissions are decomposed into four factors (i.e., A, **x**, **E** and **η**) using the method of Index Decomposition Analysis (Sect. 3.2). A represents the contribution from activities, **x** represents the effect from technology evolving over time, **E** includes fuel quality improvement (e.g., low sulfur, low ash, high heating value coals) as well as deterioration of vehicle emissions (figures c and e), and **η** represents emission reductions caused by end-of-pipe abatement measures. The black curve represents the change in total emissions.