Supplementary Materials

Table A1. Country list.

Code	Name	Code	Name
AUT	Austria	HUN	Hungary
BEL	Belgium	ITA	Italy
CAN	Canada	JPN	Japan
CHE	Switzerland	KOR	Korea, Rep.
DEU	Germany	NLD	Netherlands
DNK	Denmark	NOR	Norway
ESP	Spain	POL	Poland
FIN	Finland	PRT	Portugal
FRA	France	SWE	Sweden
GBR	United Kingdom	USA	United States
GRC	Greece		

Table A2. Unit root test results.

Variable	Im-Pesaran-Shin (IPS)	Augmented-DF (ADF)	Phillips-Perron (PP)	Cross-sectionally augmented-IPS (CIPS)	Results
***E* (emissions)**	0.517	0.943	3.259	−1.193	I (1)
***Y* (income)**	−0.455	−0.329	−0.303	−2.077 *	I (1)
***FP* (fuel price)**	−0.227	−0.183	−0.222	−1.735	I (1)
***VO* (vehicle ownership)**	−0.917	−0.884	−0.215	−1.996	I (1)
***PD* (population density)**	4.348	4.724	7.045	−1.405	I (1)
***UR* (urbanization)**	1.863	2.238	−1.023	−1.058	I (1)
***FE* (fuel economy)**	4.043	4.393	4.709	−1.172	I (1)
***TV* (transport volume)**	−1.322 *	0.113	1.772	−2.150 *	I (1)
***FT* (fuel transition)**	6.524	6.117	6.557	−1.455	I (1)

Note: * p-value < 0.10.

Table A3. Cointegration test results.

Test	Cointegration test		
	Modified Dickey-Fuller (DF) test	DF	Augmented DF
Group 1 (z1 and *E*, *Y*, *FP*, *VO*, *PD*, *UR*, *FE*, *TV*, *FT*)	−1.928 **	−3.008 ***	−4.827 ***
Group 2 (z2 and *E*, *Y*, *FP*, *VO*, *PD*, *UR*, *FE*, *TV*, *FT*)	−2.062 **	−3.067 ***	−4.870 ***
Group 3 (z3 and *E*, *Y*, *FP*, *VO*, *PD*, *UR*, *FE*, *TV*, *FT*)	−2.574 ***	−3.306 ***	−5.089 ***

Note 1: this test uses the demeaned estimator of a Kao cointegration test**.** Note 2: groups 1–3 have *E*, *Y*, *FP*, *VO*, *PD*, *UR*, *FE*, *TV*, *FT* in common, and each group includes *z1*, *z2*, *z3*, respectively. Note 3: *** *p*-value < 0.01, ** *p*-value < 0.05