

## Supplementary Materials

**Table 6.** OECD decoupling results of SA (fix based year method).

Year	$\Delta$ GDP (%)	$\Delta$ CO <sub>2</sub> (%)	Decoupling index	Decoupling factor	Decoupling state
1990–1991	–1.02	3.84	1.049	–0.049	Coupling
1990–1992	–1.58	–1.18	1.006	–0.006	Coupling
1990–1993	–0.64	1.03	1.047	–0.047	Coupling
1990–1994	0.33	1.97	1.063	–0.063	Coupling
1990–1995	0.89	1.27	1.015	–0.015	Coupling
1990–1996	1.46	1.30	0.988	0.012	Relative decoupling
1990–1997	1.63	1.62	0.996	0.004	Relative decoupling
1990–1998	1.49	1.45	0.993	0.007	Relative decoupling
1990–1999	1.58	1.25	0.967	0.033	Relative decoupling
1990–2000	1.84	1.06	0.923	0.077	Relative decoupling
1990–2001	1.92	0.82	0.884	0.116	Relative decoupling
1990–2002	2.07	0.41	0.817	0.183	Relative decoupling
1990–2003	2.14	1.11	0.869	0.131	Relative decoupling
1990–2004	2.31	1.90	0.933	0.067	Relative decoupling
1990–2005	2.51	1.29	0.822	0.178	Relative decoupling
1990–2006	2.70	1.66	0.835	0.165	Relative decoupling
1990–2007	2.87	1.82	0.826	0.174	Relative decoupling
1990–2008	2.91	1.99	0.835	0.165	Relative decoupling
1990–2009	2.68	2.32	0.919	0.081	Relative decoupling
1990–2010	2.70	1.77	0.814	0.186	Relative decoupling
1990–2011	2.74	1.65	0.779	0.221	Relative decoupling
1990–2012	2.73	1.62	0.768	0.232	Relative decoupling

Decoupling factor is defined as  $I-(EP/DF)_{T_0}/(EP/DF)_T$  where EP = environmental pressure and DF = driving force. Decoupling occurs when the value of the decoupling factor is between 0 and 1. *Source:* OECD, Eurostat.

**Table 7.** Tapio decoupling results of SA (rolling based year method).

Year	$\Delta$ GDP (%)	$\Delta$ CO <sub>2</sub> (%)	d	Decoupling state
1990–1991	–1.02	3.84	–3.78	Strong negative decoupling
1991–1992	–2.14	–6.20	2.90	Recessive decoupling
1993–1993	1.23	5.45	4.42	Expansive negative decoupling
1993–1994	3.23	4.78	1.48	Expansive negative decoupling
1994–1995	3.12	–1.52	–0.49	Strong decoupling
1995–1996	4.31	1.47	0.34	Weak decoupling
1996–1997	2.65	3.54	1.34	Expansive negative decoupling
1997–1998	0.52	0.24	0.46	Weak decoupling
1998–1999	2.36	–0.32	–0.13	Strong decoupling
1999–2000	4.15	–0.65	–0.16	Strong decoupling
2000–2001	2.74	–1.59	–0.58	Strong decoupling
2001–2002	3.67	–4.15	–1.13	Strong decoupling
2002–2003	2.95	9.53	3.23	Expansive negative decoupling
2003–2004	4.55	12.16	2.67	Expansive negative decoupling
2004–2005	5.28	–7.26	–1.38	Strong decoupling
2005–2006	5.60	7.25	1.29	Expansive negative decoupling
2006–2007	5.55	4.43	0.80	Weak decoupling
2007–2008	3.62	4.82	1.33	Expansive negative decoupling
2008–2009	–1.53	8.37	–5.48	Strong negative decoupling
2009–2010	3.14	–8.69	–2.77	Strong decoupling
2010–2011	3.60	–0.77	–0.21	Strong decoupling
2011–2012	2.47	0.99	0.40	Weak decoupling