

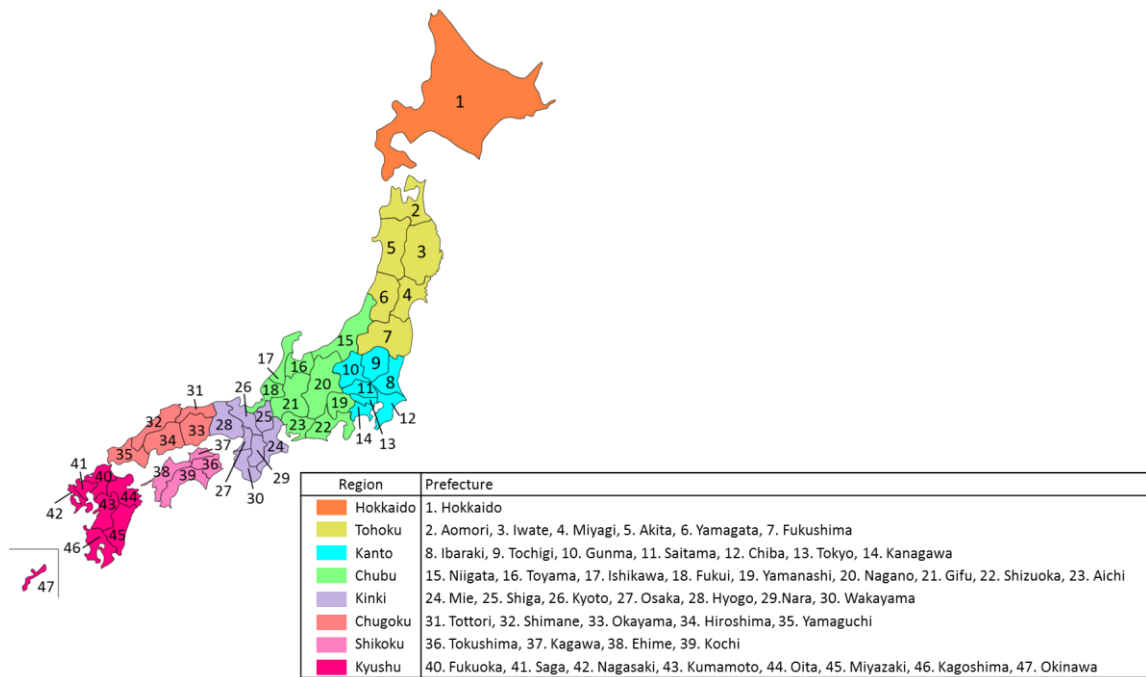


Figure S1. Geographical information for the prefectures and regions in Japan

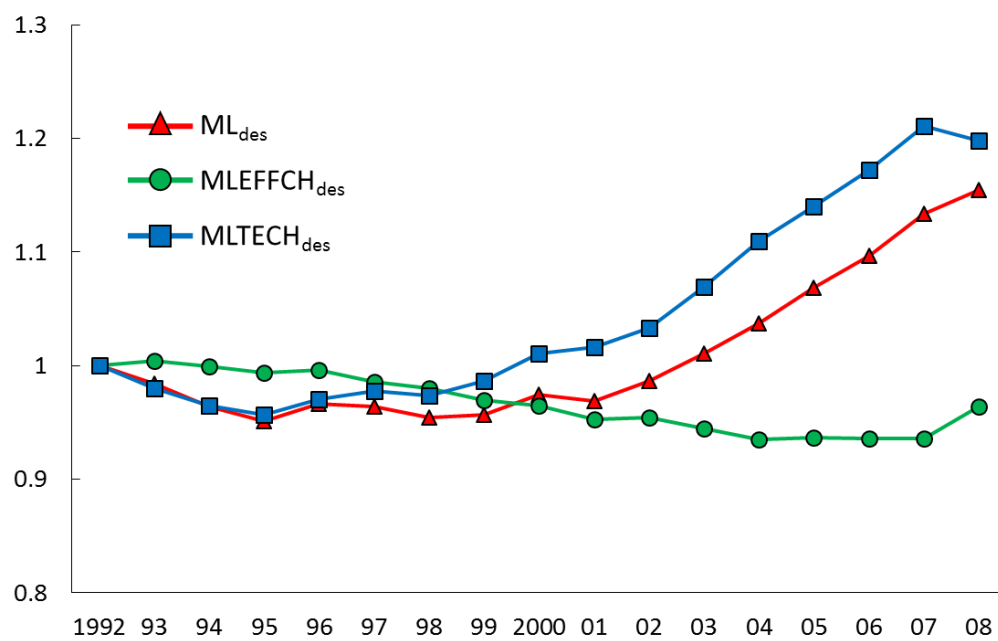


Figure S2. Changes in ML_{des} indices

Table S1. Results of ML_{des} indices in the 46 prefectures

Region	Prefecture	ML_{des}	$MLEFFCH_{des}$	$MLTECH_{des}$
Hokkaido	Hokkaido	1.128	0.881	1.281
Tohoku	Aomori	1.186	0.933	1.271
	Iwate	1.141	0.937	1.217
	Miyagi	1.199	0.978	1.226
	Akita	1.266	1.000	1.266
	Yamagata	1.259	1.040	1.210
	Fukushima	1.467	1.158	1.267
Kanto	Ibaraki	1.389	1.079	1.288
	Tochigi	1.337	1.074	1.245
	Gunma	1.120	0.919	1.219
	Saitama	1.022	0.839	1.218
	Chiba	1.099	0.858	1.281
	Tokyo	1.202	1.000	1.202
	Kanagawa	1.149	0.900	1.276
Chubu	Niigata	1.339	1.038	1.290
	Toyama	1.255	0.988	1.270
	Ishikawa	1.149	0.931	1.234
	Fukui	1.353	1.051	1.287
	Yamanashi	1.338	1.064	1.257
	Nagano	1.419	1.179	1.203
	Gifu	0.980	0.821	1.193
	Shizuoka	1.431	1.135	1.261
Kinki	Aichi	1.277	1.001	1.276
	Mie	1.462	1.154	1.267
	Shiga	1.210	1.000	1.210
	Kyoto	0.841	0.868	0.970
	Osaka	0.890	0.831	1.072
	Hyogo	1.125	0.878	1.281
	Nara	0.957	1.000	0.957
Chugoku	Wakayama	1.178	0.938	1.255
	Tottori	na	na	na
	Shimane	1.177	0.915	1.286
	Okayama	1.103	0.899	1.227
	Hiroshima	1.226	1.008	1.216
Shikoku	Yamaguchi	1.184	0.945	1.253
	Tokushima	1.164	0.994	1.171
	Kagawa	1.030	0.845	1.220
	Ehime	1.033	0.932	1.108
	Kochi	na	na	na
Kyushu	Fukuoka	0.908	0.794	1.144
	Saga	1.328	1.004	1.322
	Nagasaki	0.884	0.931	0.950
	Kumamoto	0.977	0.895	1.091
	Oita	1.226	1.005	1.219
	Miyazaki	0.968	0.921	1.051
	Kagoshima	1.075	0.991	1.084
	Geometric mean	1.158	0.963	1.203