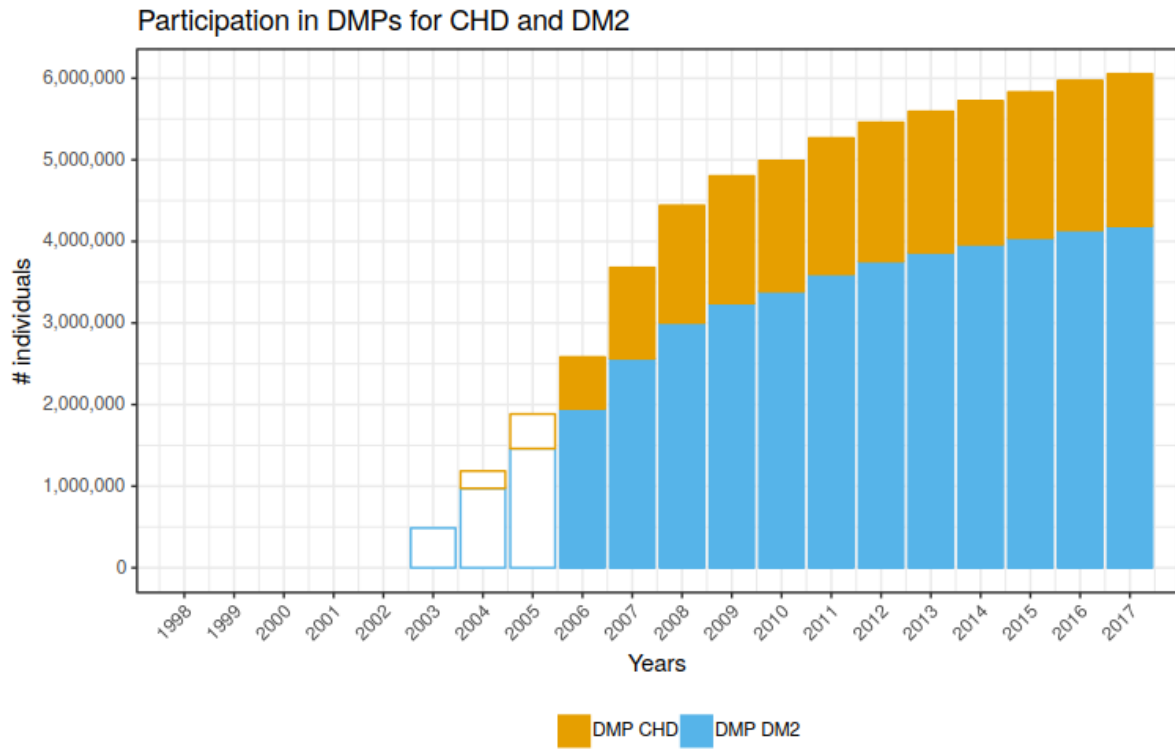


**Additional file 1**

**Figure S1**

Enrollment history for the German DMPs for type 2 diabetes and CHD.



**Table S1**

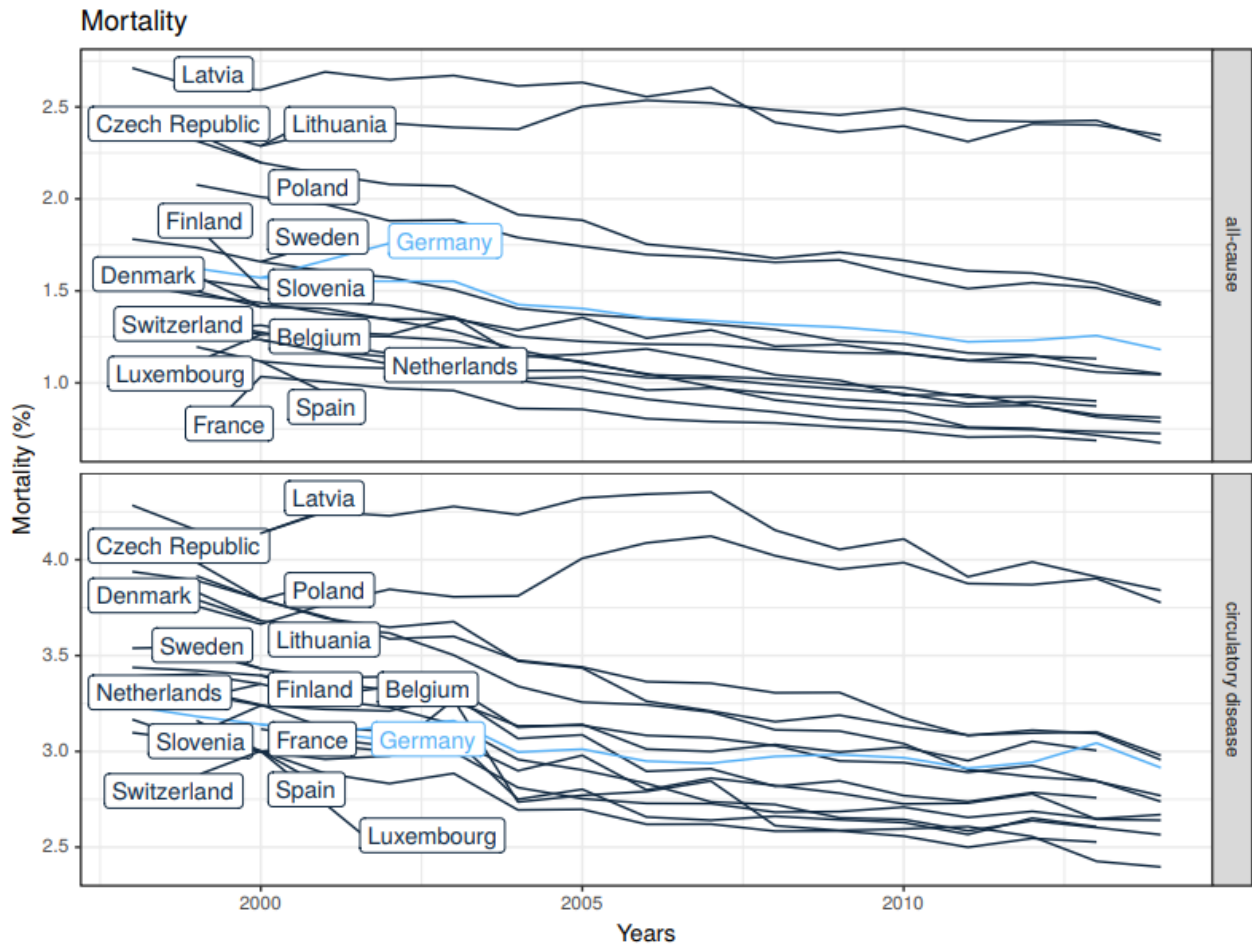
Description of analyzed variables and the source of the data

**Variables and data sources**

| <b>Variable</b>         | <b>Unit</b>                      | <b>Source</b>                 | <b>Source</b>   |
|-------------------------|----------------------------------|-------------------------------|---|
| Mortality               | # of deaths                      | WHO                           | <a href="http://apps.who.int/healthinfo/statistics/mortality/causeofdeath_query/start.php">http://apps.who.int/healthinfo/statistics/mortality/causeofdeath_query/start.php</a> |
| Population size         | Total # alive                    | WHO                           | <a href="http://apps.who.int/healthinfo/statistics/mortality/causeofdeath_query/start.php">http://apps.who.int/healthinfo/statistics/mortality/causeofdeath_query/start.php</a> |
| Age                     | 20-54, 55-64, 65-74, 75+         |                               | <a href="http://apps.who.int/healthinfo/statistics/mortality/causeofdeath_query/start.php">http://apps.who.int/healthinfo/statistics/mortality/causeofdeath_query/start.php</a> |
| Sex                     | men, women                       |                               | <a href="http://apps.who.int/healthinfo/statistics/mortality/causeofdeath_query/start.php">http://apps.who.int/healthinfo/statistics/mortality/causeofdeath_query/start.php</a> |
| GDP per capita          | GDP/capita                       | World Bank                    | <a href="https://data.worldbank.org/">https://data.worldbank.org/</a>   |
| Unemployment            | %                                | World Bank                    | <a href="https://data.worldbank.org/">https://data.worldbank.org/</a>   |
| Health care expenditure | % of GDP                         | World Bank                    | <a href="https://data.worldbank.org/">https://data.worldbank.org/</a>   |
| Smoking prevalence      | % smokers                        | OECD                          | <a href="https://data.oecd.org/">https://data.oecd.org/</a>   |
| Alcohol consumption     | liter of alcohol/capita and year | OECD                          | <a href="https://data.oecd.org/">https://data.oecd.org/</a>   |
| Obesity prevalence      | % (age standardized)             | NCD Risk Factor collaboration | <a href="http://ncdrisc.org/data-downloads.html">http://ncdrisc.org/data-downloads.html</a>   |
| Diabetes prevalence     | % (age standardized)             | NCD Risk Factor collaboration | <a href="http://ncdrisc.org/data-downloads.html">http://ncdrisc.org/data-downloads.html</a>   |
| Hypertension prevalence | % (age standardized)             | NCD Risk Factor collaboration | <a href="http://ncdrisc.org/data-downloads.html">http://ncdrisc.org/data-downloads.html</a>   |

**Figure S2**

Trends in circulatory mortality (top panel) and all-cause mortality (bottom panel) in Germany as well as the rest of the European countries from 1998 – 2014



**Table S2**

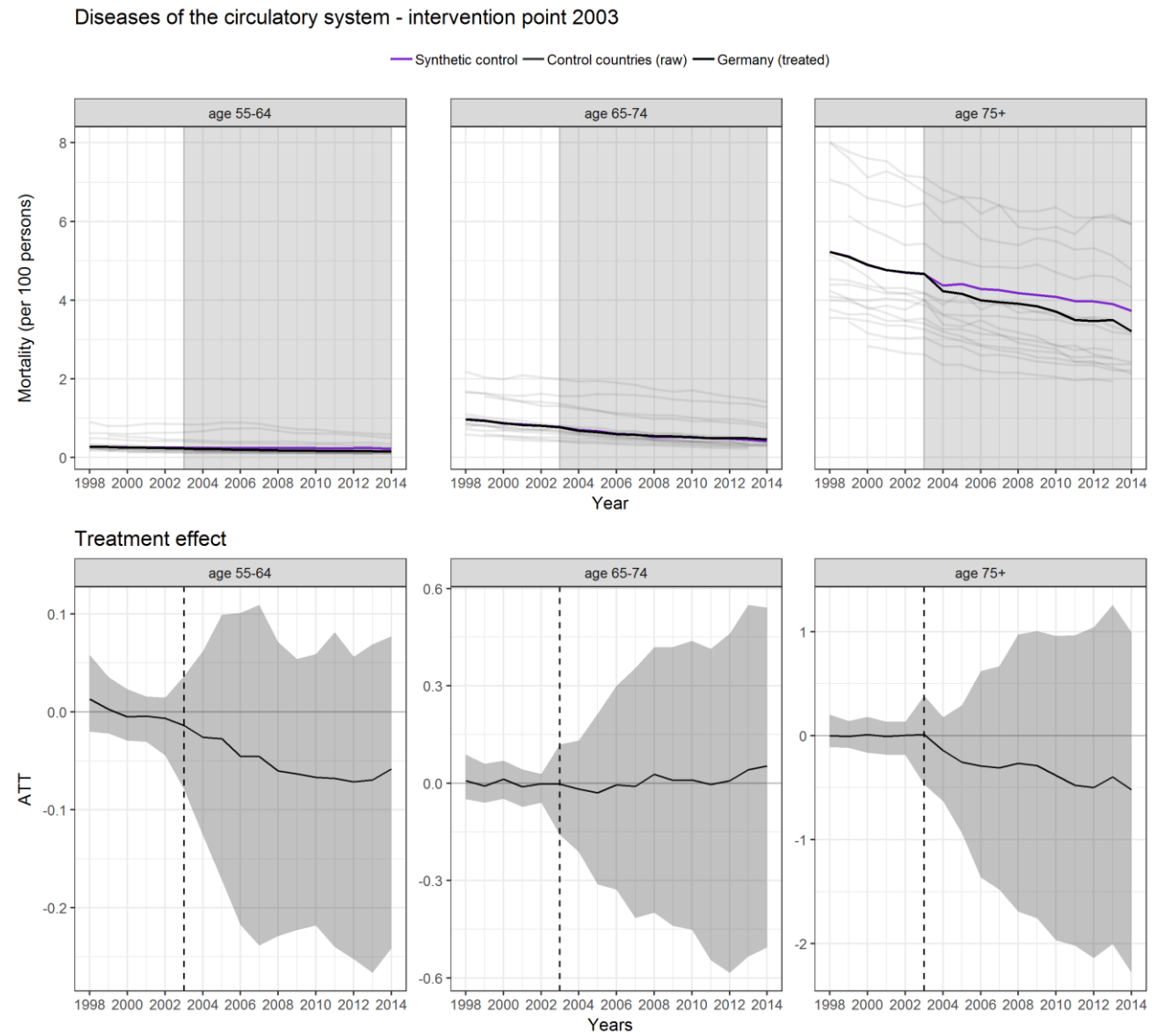
The average treatment effects as well as the 95% confidence interval (CI), for each subgroup, each outcome and each intervention time point.

| Intervention time |                | 2003  |               | 2006  |               | 2009  |               |
|-------------------|----------------|-------|---------------|-------|---------------|-------|---------------|
| Age group         | Mortality type | Est   | 95-% CI       | Est   | 95-% CI       | Est   | 95-% CI       |
| 55-64 years       | Circulatory    | -0.05 | [-0.14; 0.04] | -0.03 | [-0.11; 0.04] | -0.02 | [-0.11; 0.04] |
|                   | All-cause      | -0.03 | [-0.41; 0.32] | -0.04 | [-0.22; 0.09] | -0.04 | [-0.24; 0.1]  |
| 65-74 years       | Circulatory    | -0.05 | [-0.49; 0.59] | 0.13  | [-0.17; 0.35] | 0.02  | [-0.2; 0.18]  |
|                   | All-cause      | -0.27 | [-1.01; 0.49] | 0.24  | [-0.42; 0.54] | 0.18  | [-0.22; 0.45] |
| 75+ years         | Circulatory    | -0.3  | [-1.09; 0.24] | 0.04  | [-0.63; 0.54] | -0.13 | [-0.65; 0.34] |
|                   | All-cause      | 0     | [-0.48; 0.48] | -0.04 | [-0.64; 0.63] | -0.24 | [-0.83; 0.53] |
| 20-54 years       | Circulatory    | 0     | [-0.02; 0.01] | -0.01 | [-0.03; 0.01] | 0     | [-0.02; 0.02] |
|                   | All-cause      | -0.03 | [-0.73; 0.67] | -0.01 | [-0.09; 0.06] | 0     | [-0.09; 0.06] |

Table S1: Average treatment effect with 95% CI for all subgroup analysis

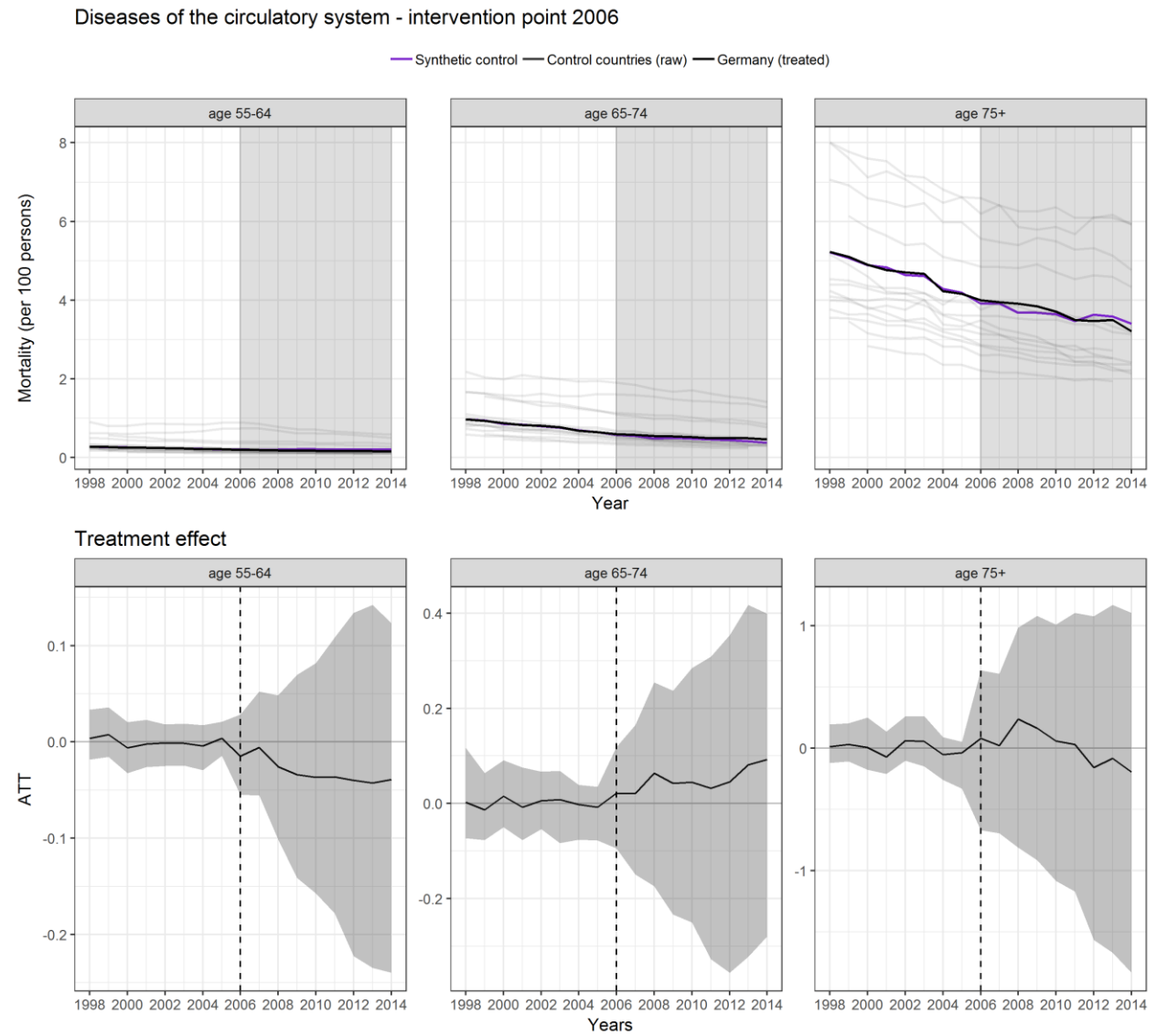
### Figure S3

Subgroup analysis: disaggregated age (55-64; 65-74; 75+) for circulatory mortality, intervention point 2003



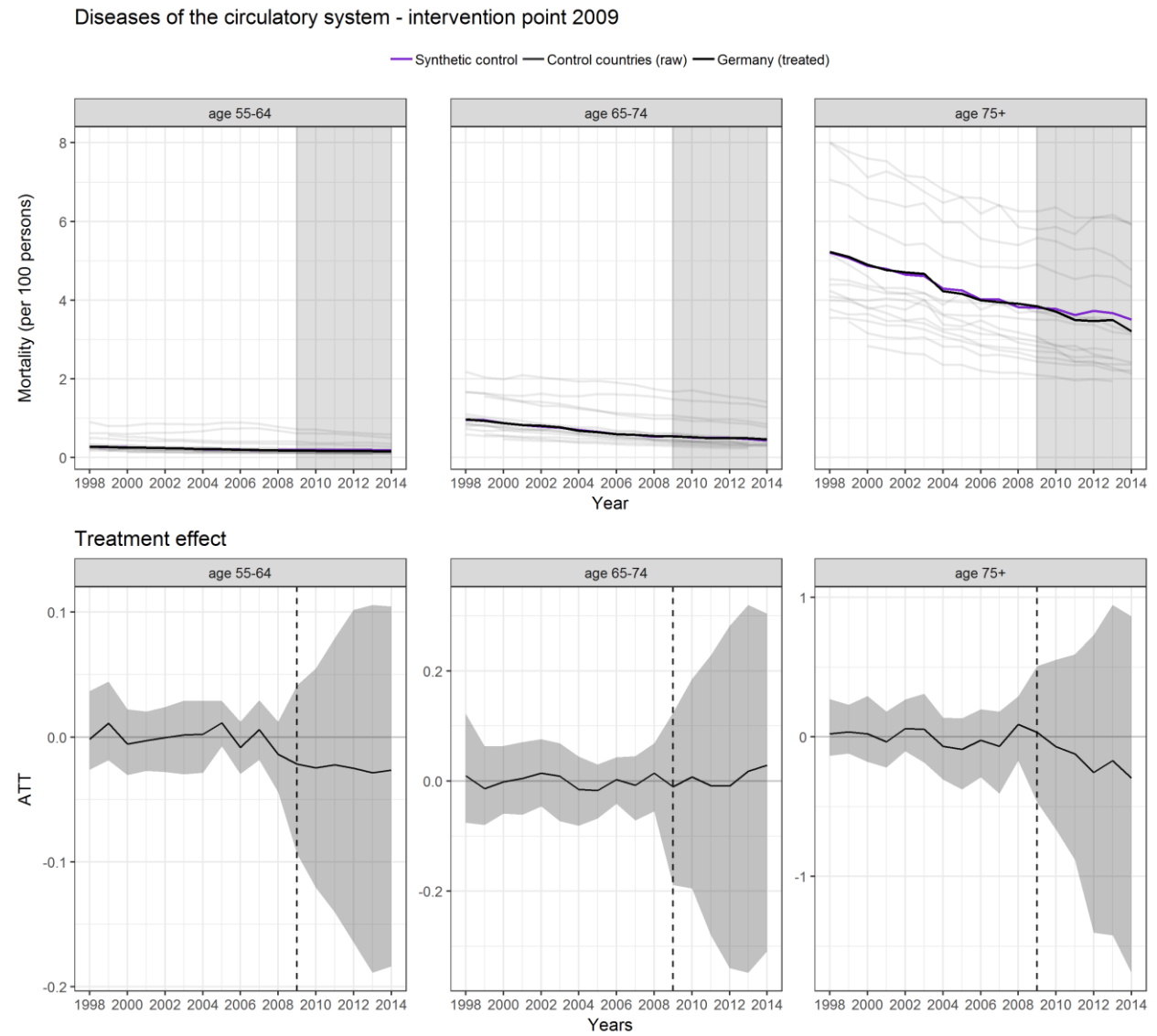
### Figure S4

Subgroup analysis: disaggregated age (55-64; 65-74; 75+) for circulatory mortality, intervention point 2006



### Figure S5

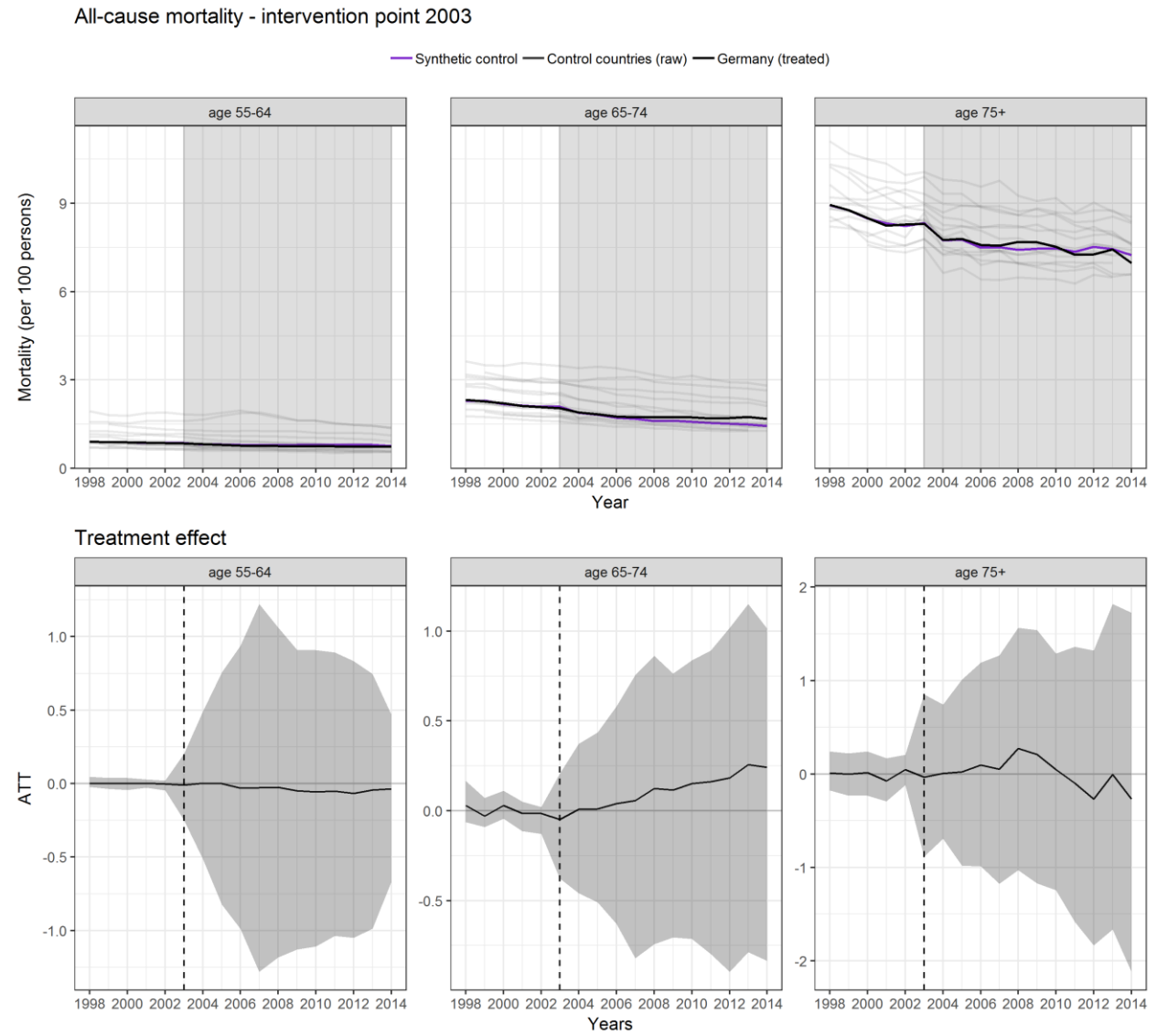
Subgroup analysis: disaggregated age (55-64; 65-74; 75+) for circulatory mortality, intervention point 2009





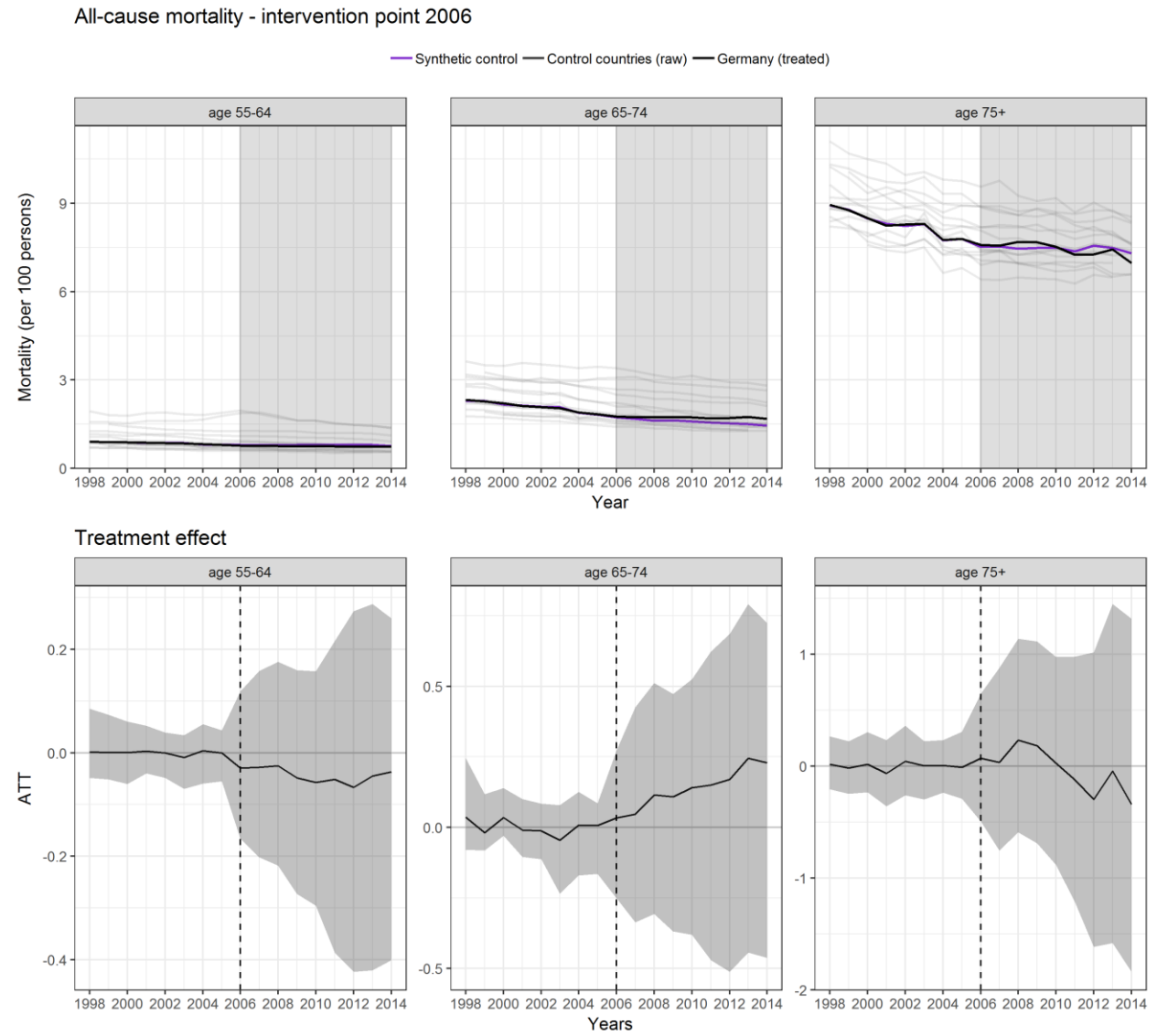
**Figure S6**

Subgroup analysis: disaggregated age (55-64; 65-74; 75+) for all-cause mortality, intervention point 2003



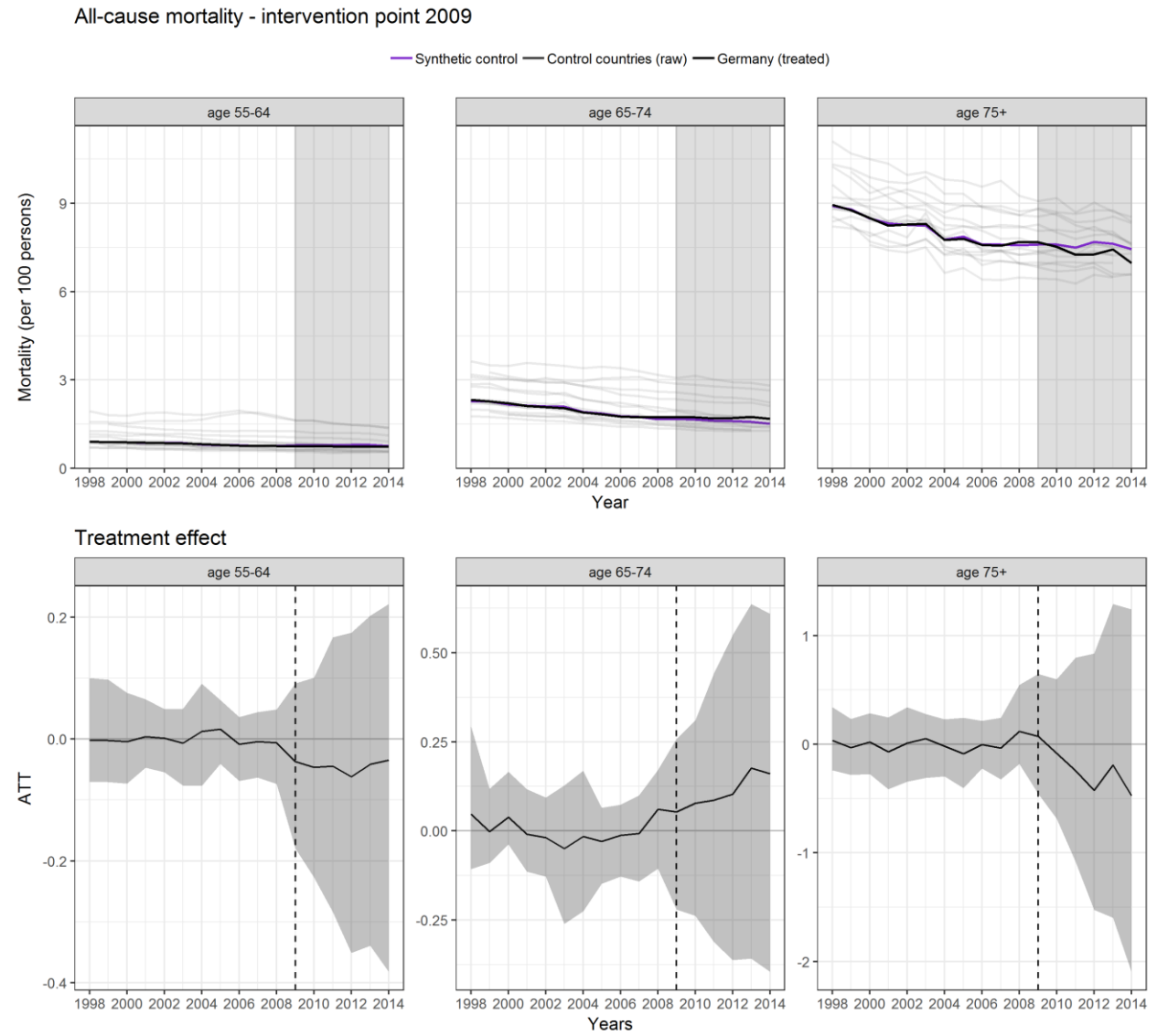
# Figure S7

Subgroup analysis: disaggregated age (55-64; 65-74; 75+) for all-cause mortality, intervention point 2006



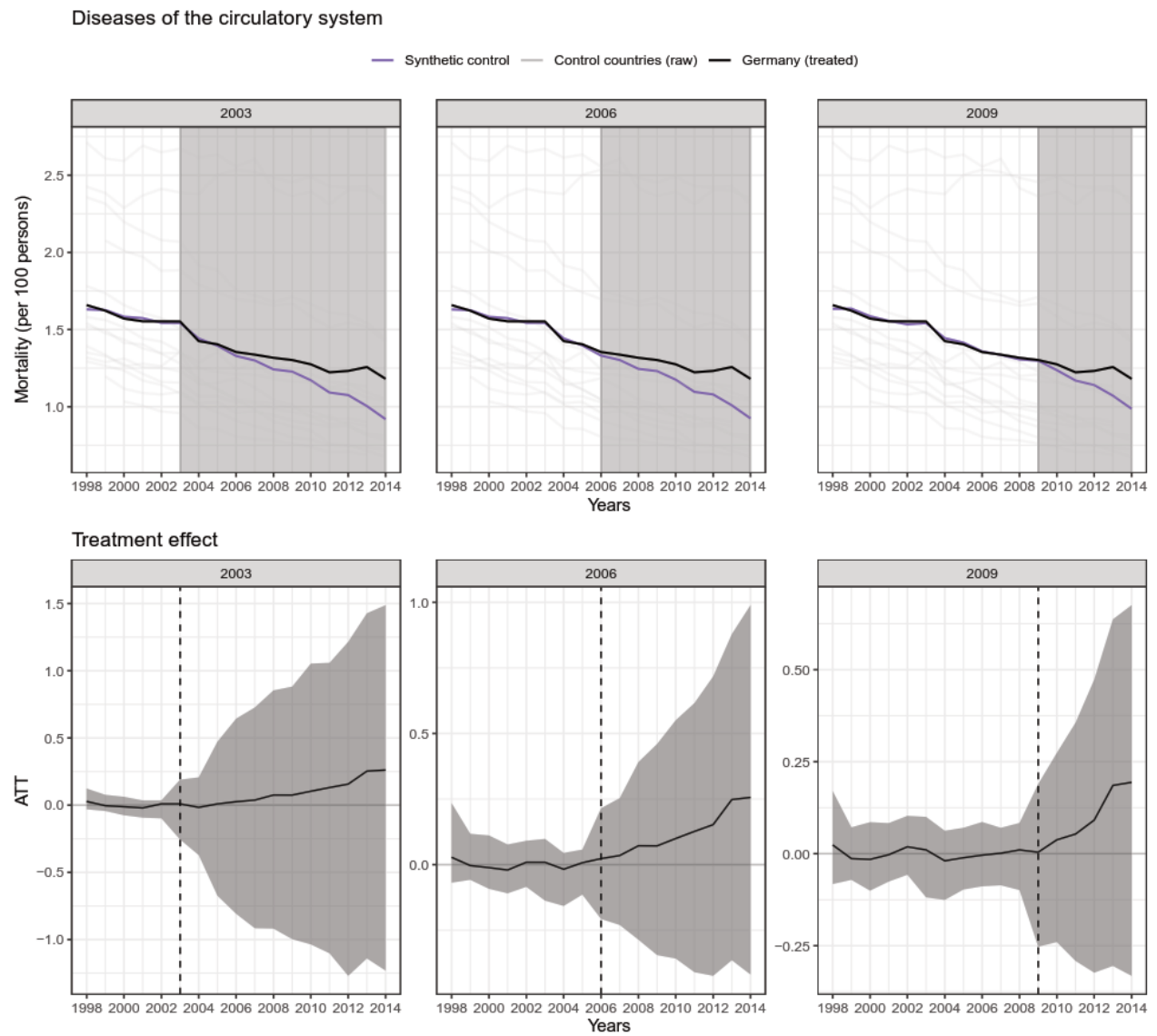
# Figure S8

Subgroup analysis: disaggregated age (55-64; 65-74; 75+) for all-cause mortality, intervention point 2009



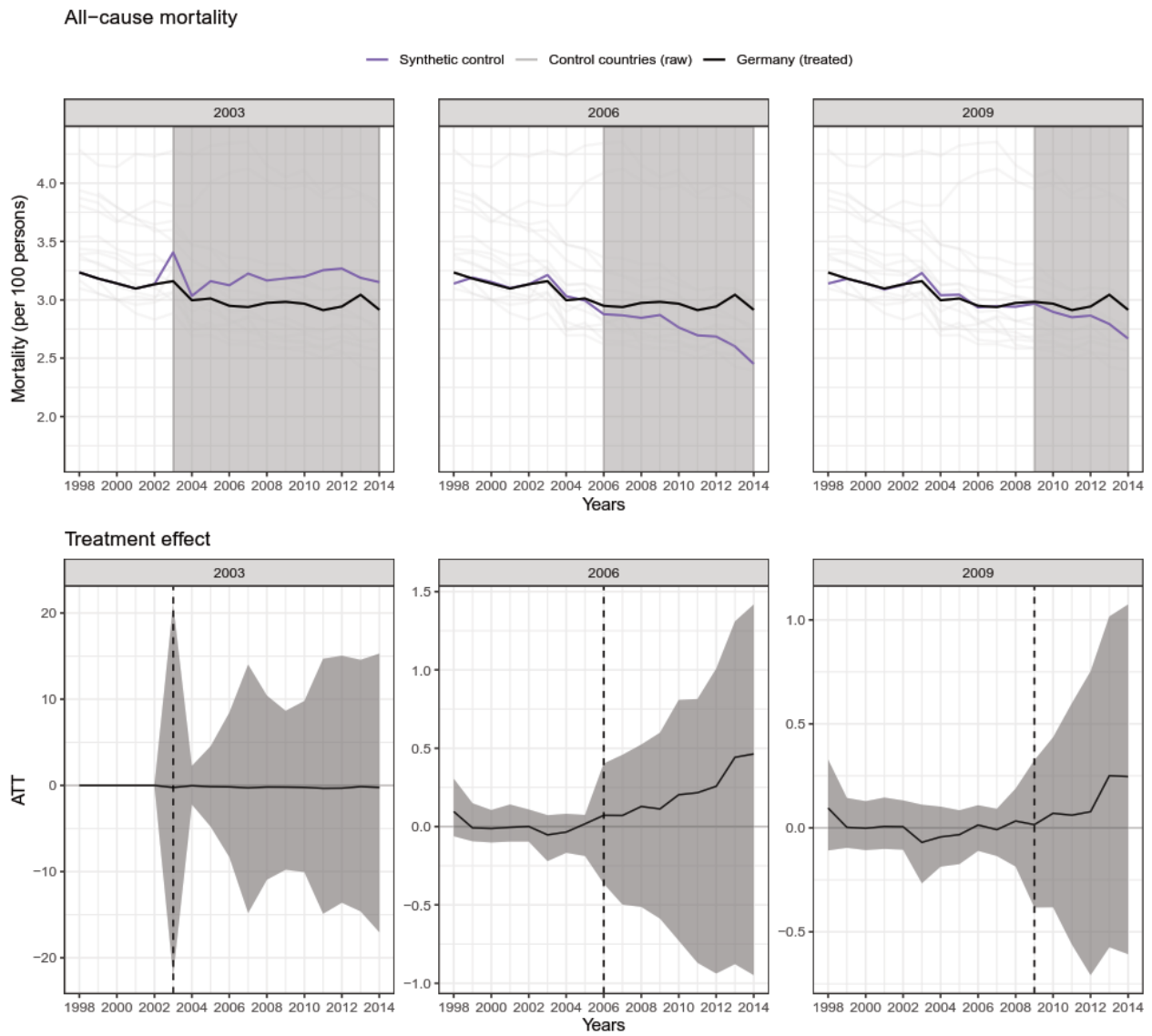
**Figure S9**

Sensitivity analysis: younger age group (20-54), where no or minimal effect is to be expected, for circulatory mortality.



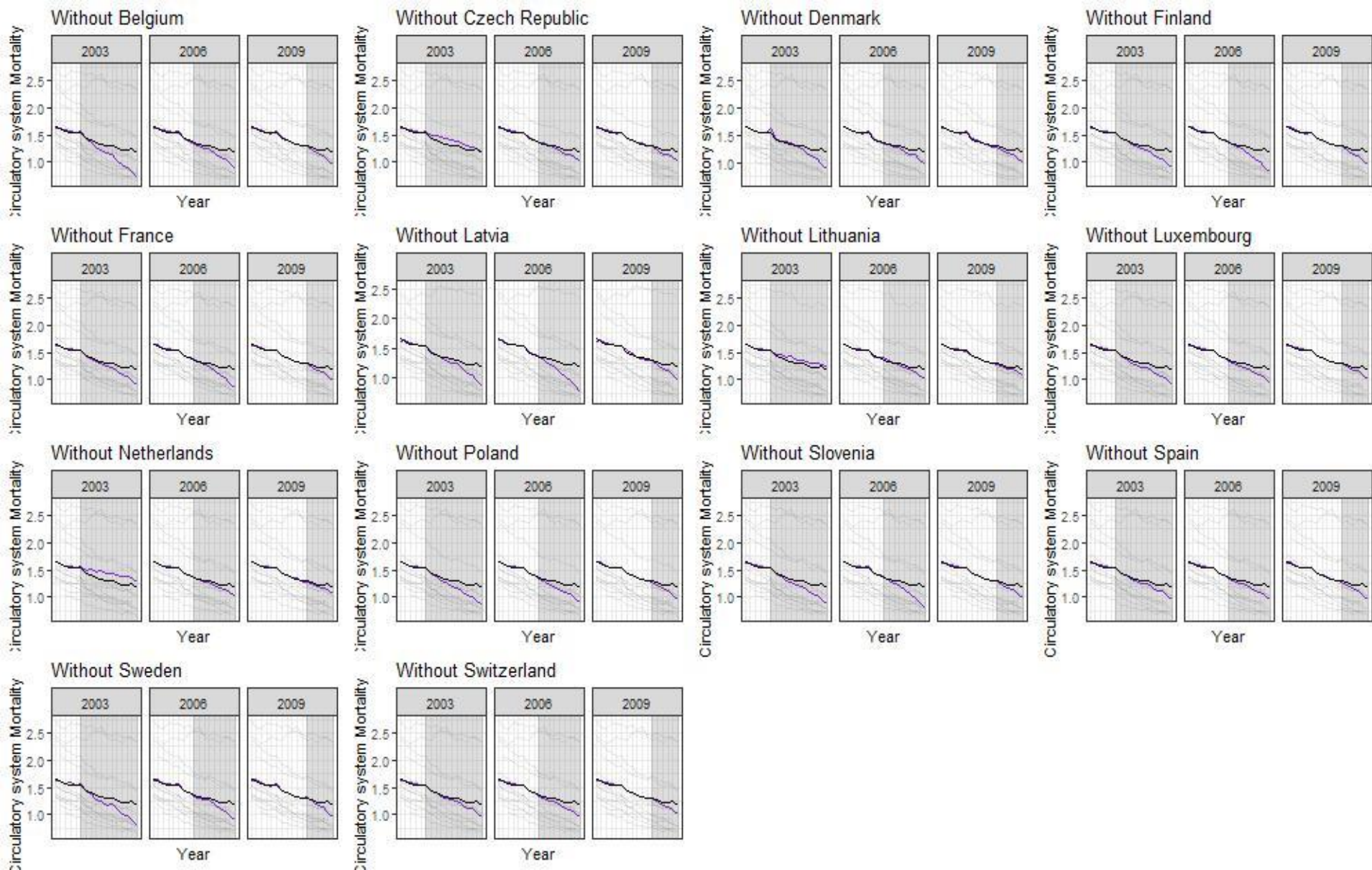
**Figure S10**

Sensitivity analysis: younger age group (20-54), where no or minimal effect is to be expected, for all-cause mortality.



# Figure S11

Sensitivity analysis: leave-one-country-out analyses for CHD mortality





**Figure S12**

Sensitivity analysis: leave-one-country-out analyses for all-cause mortality

