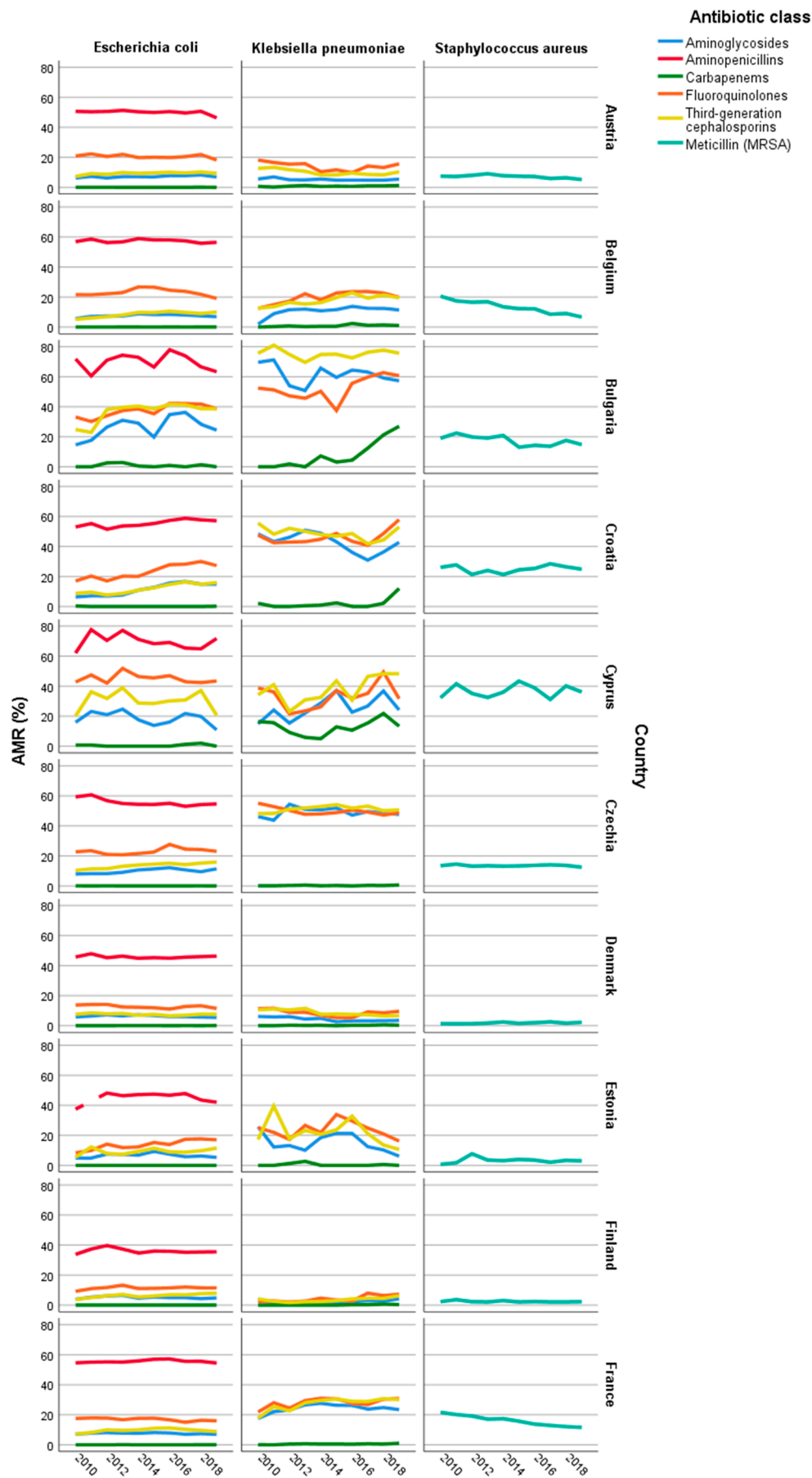
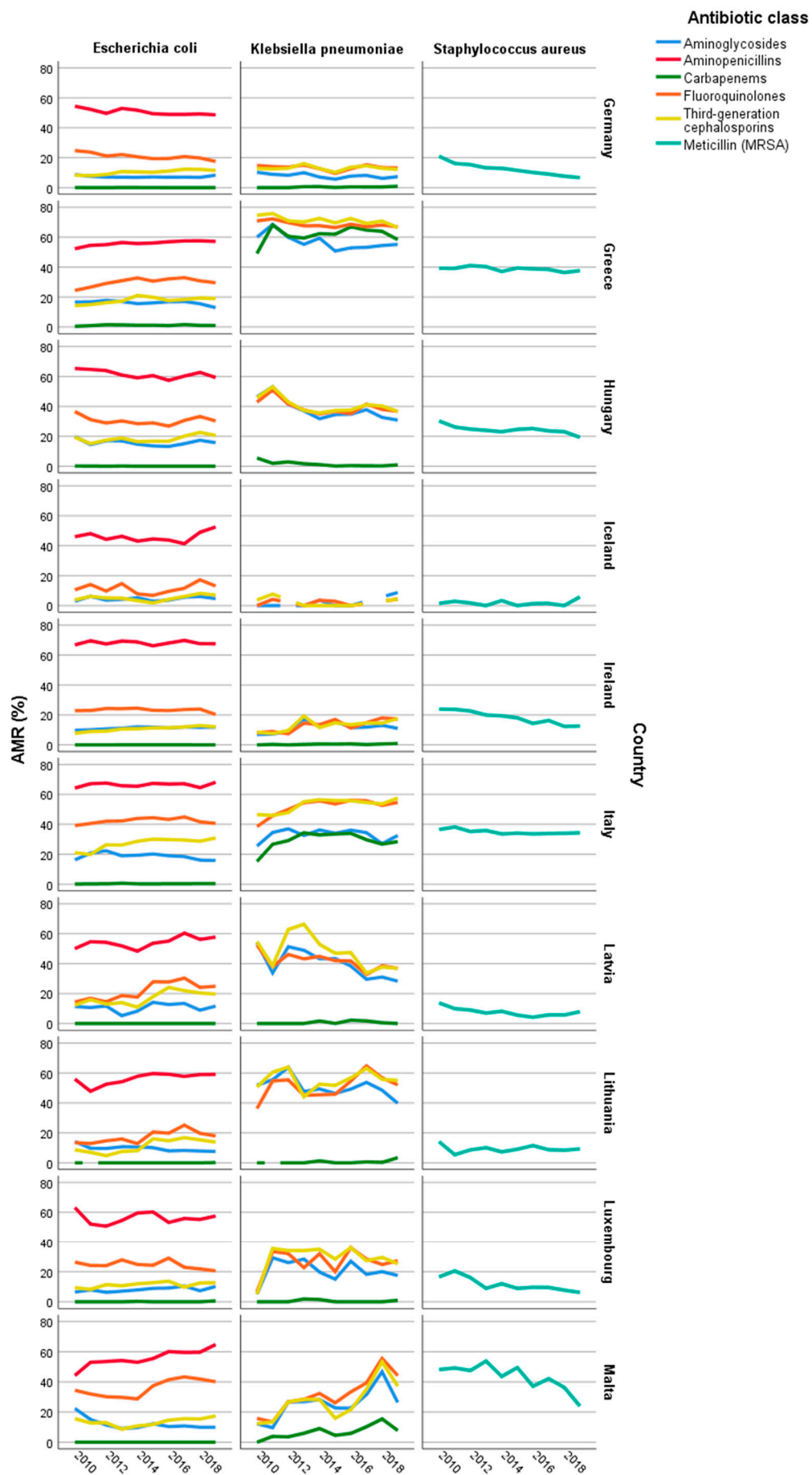


Figure S1. Trends in AMR (%) for *E. coli*, *K. pneumoniae*, and *S. aureus* between 2000-2019 across 30 European countries. Antibiotic classes are represented by coloured lines.





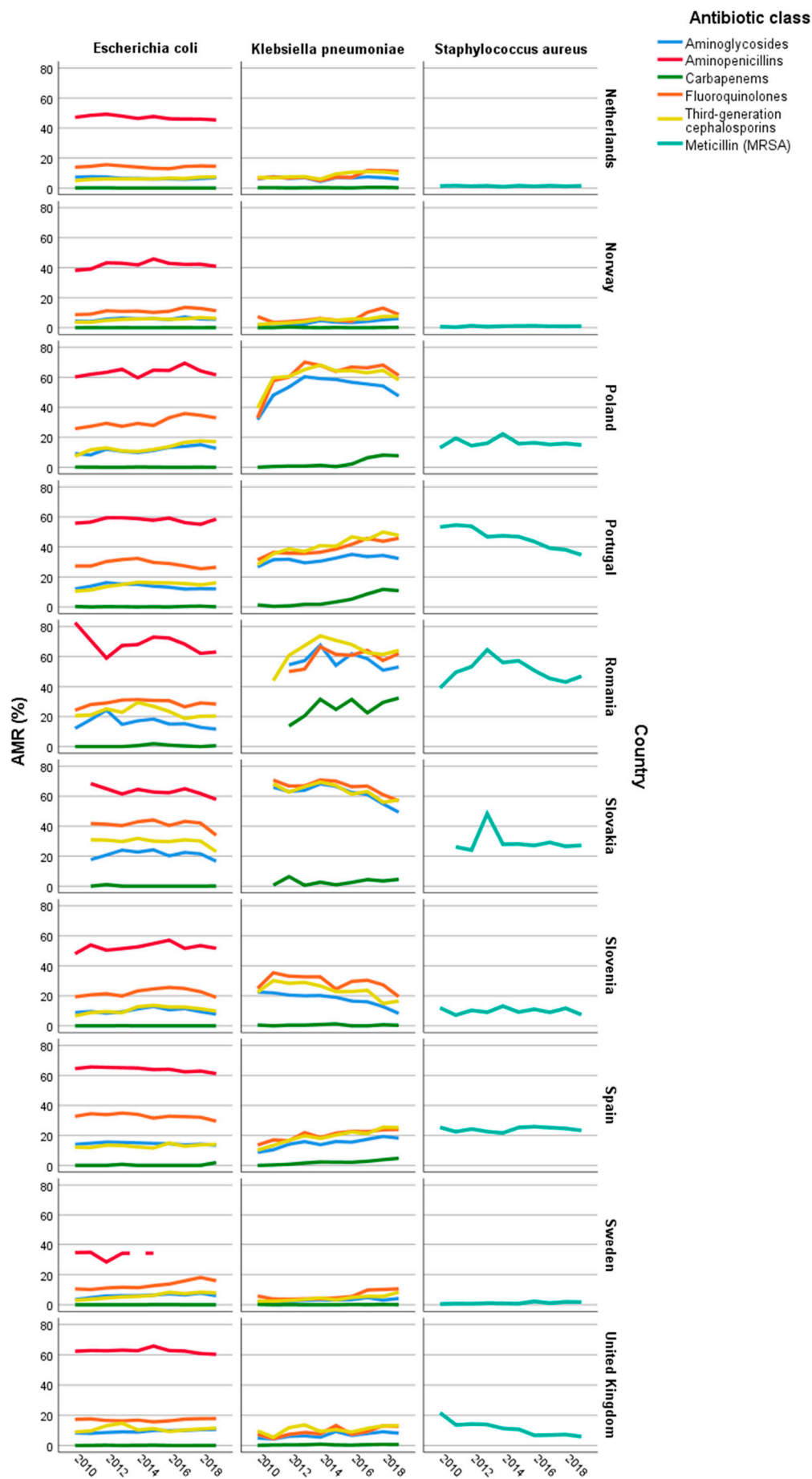
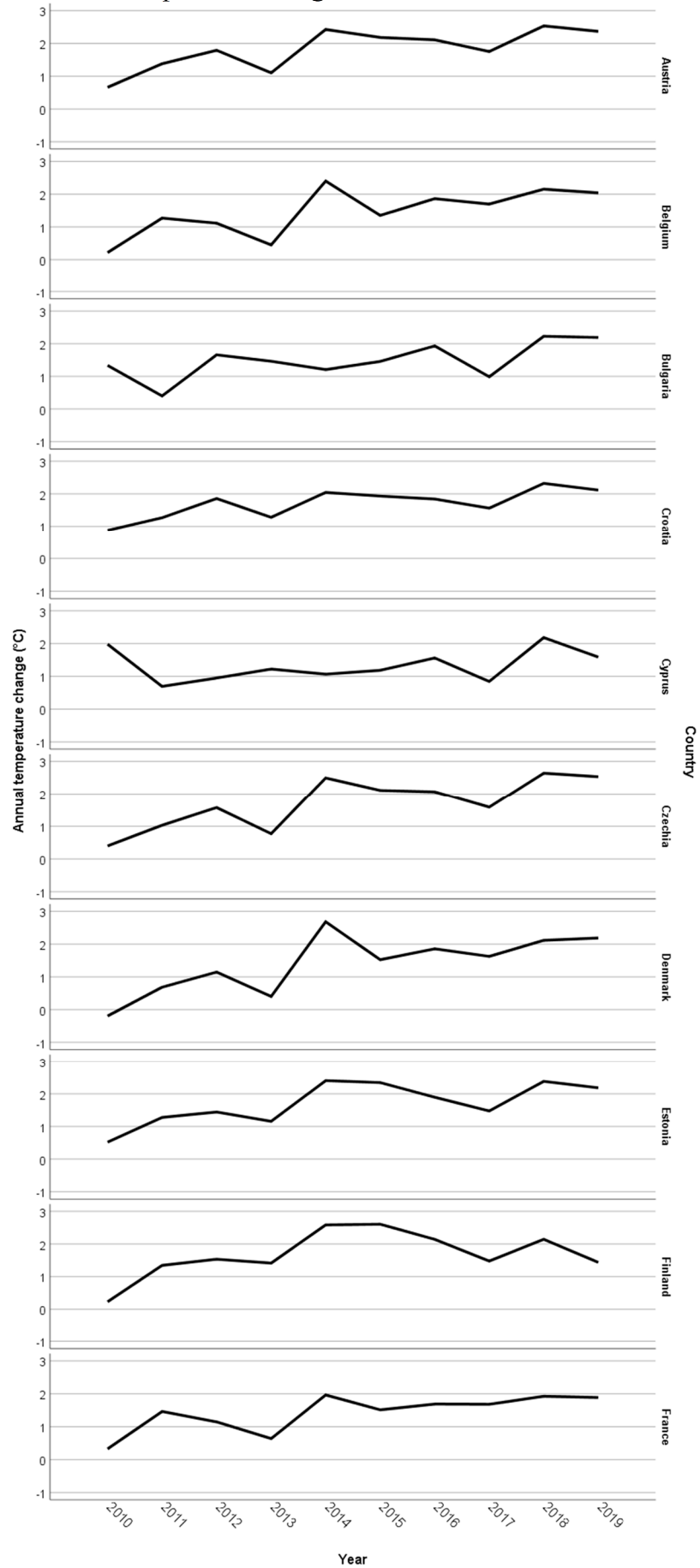
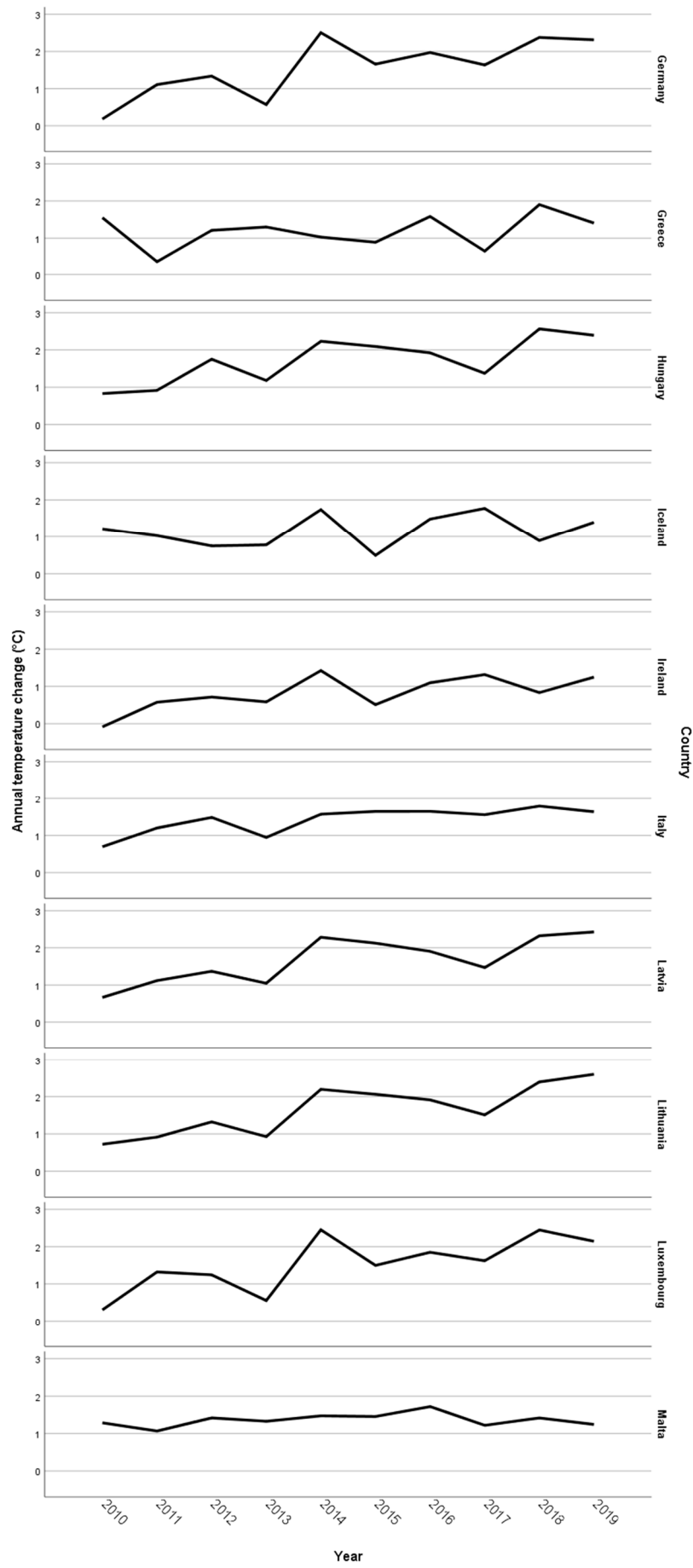


Figure S2. Trends in annual temperature change between 2010-2019 across 30 European countries.





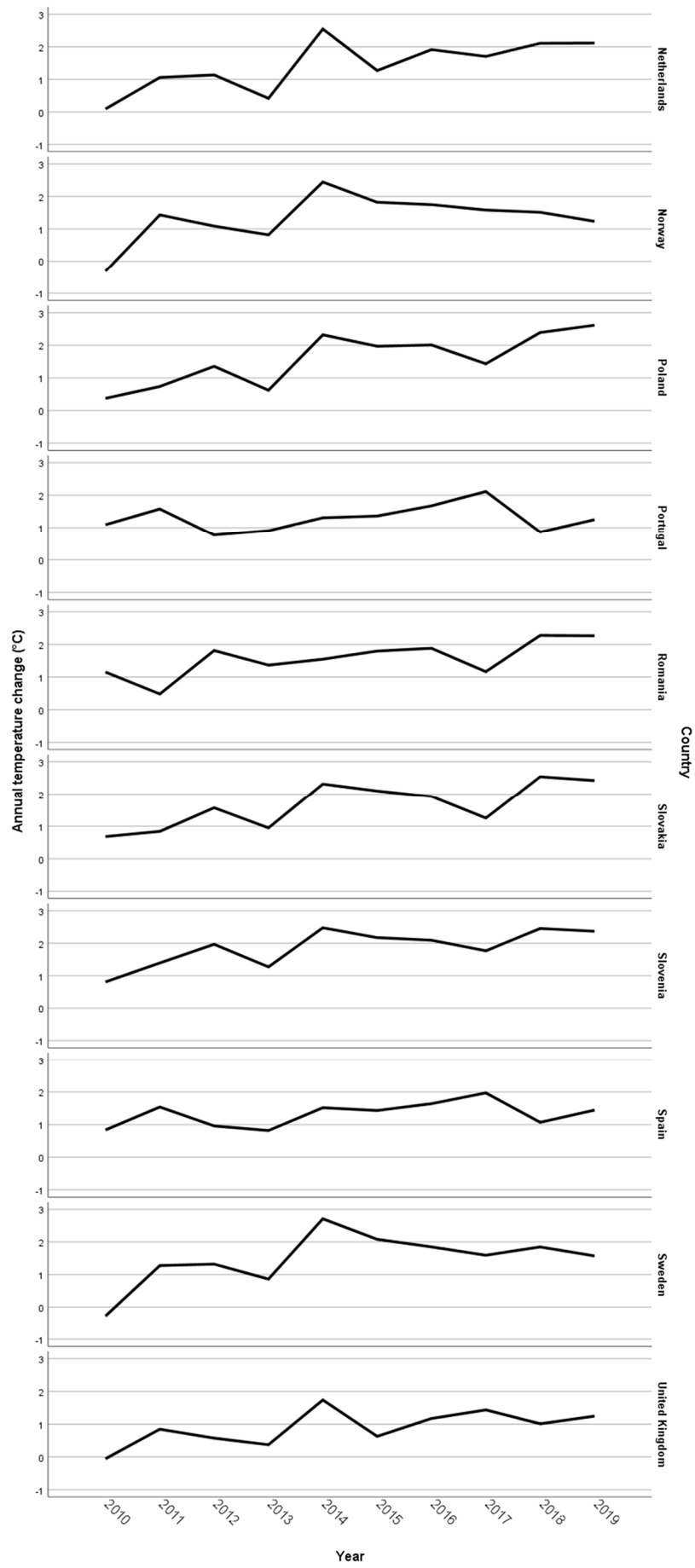


Figure S3. Association of annual temperature change with population density (A), GDP per capita (B), and the governance index (C). Unadjusted weighted linear trend lines are shown.

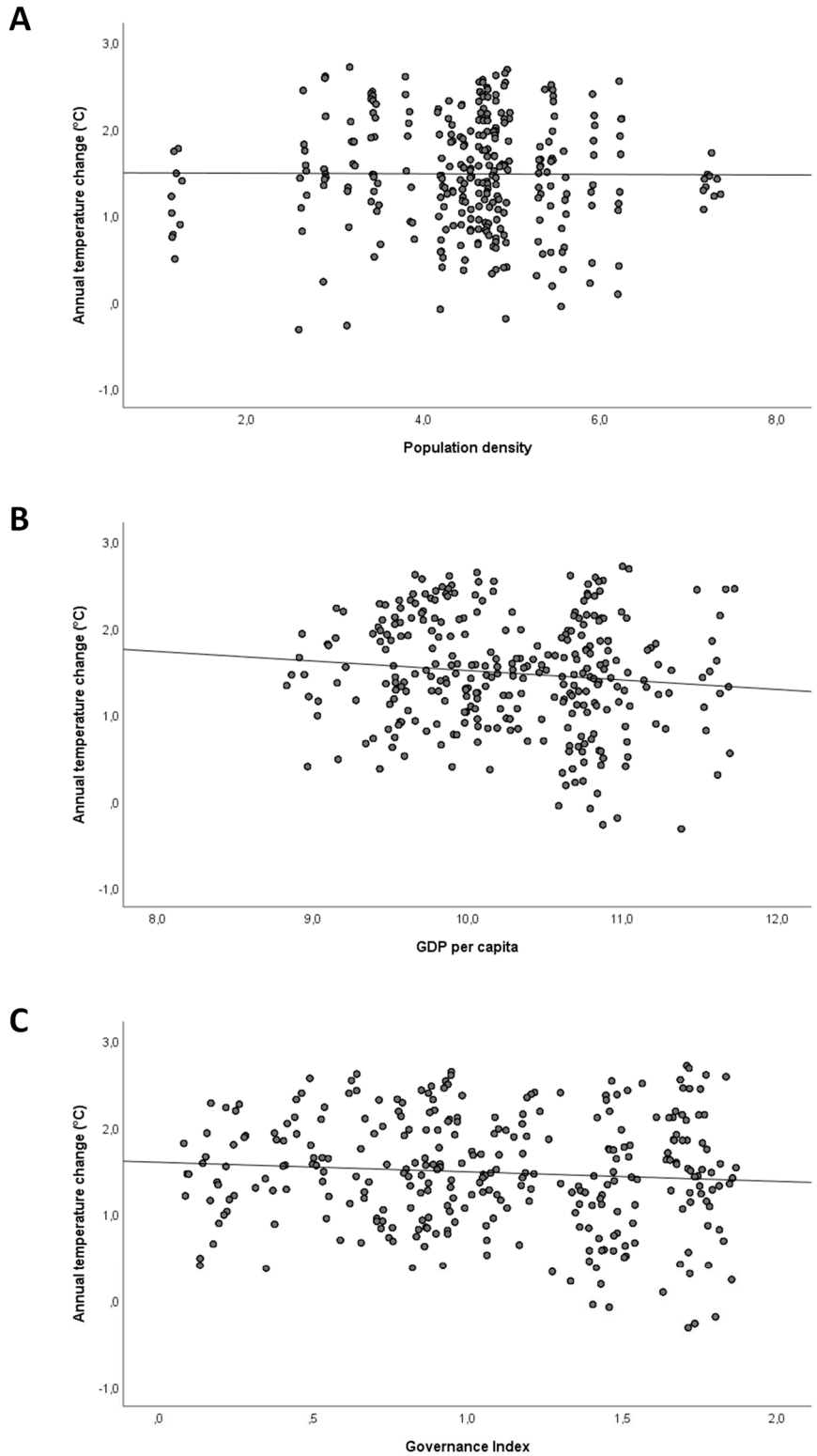
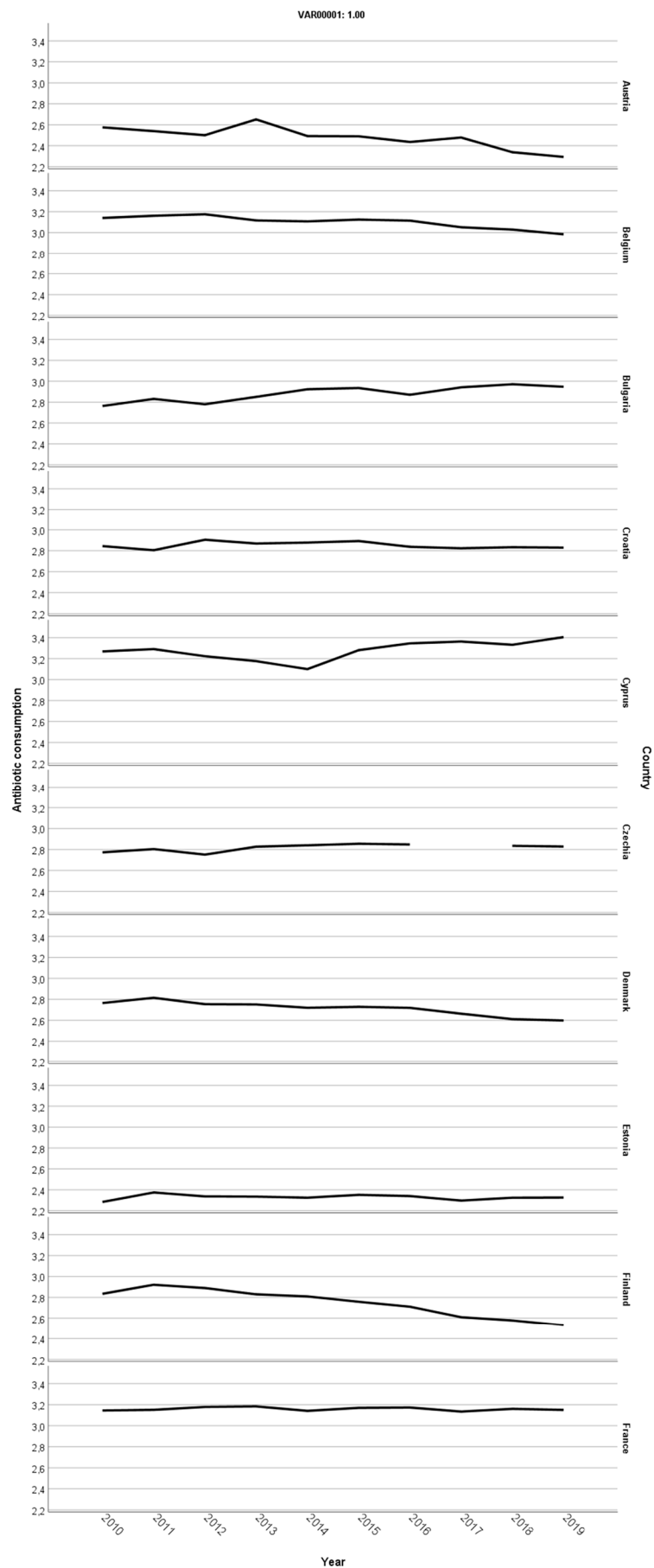
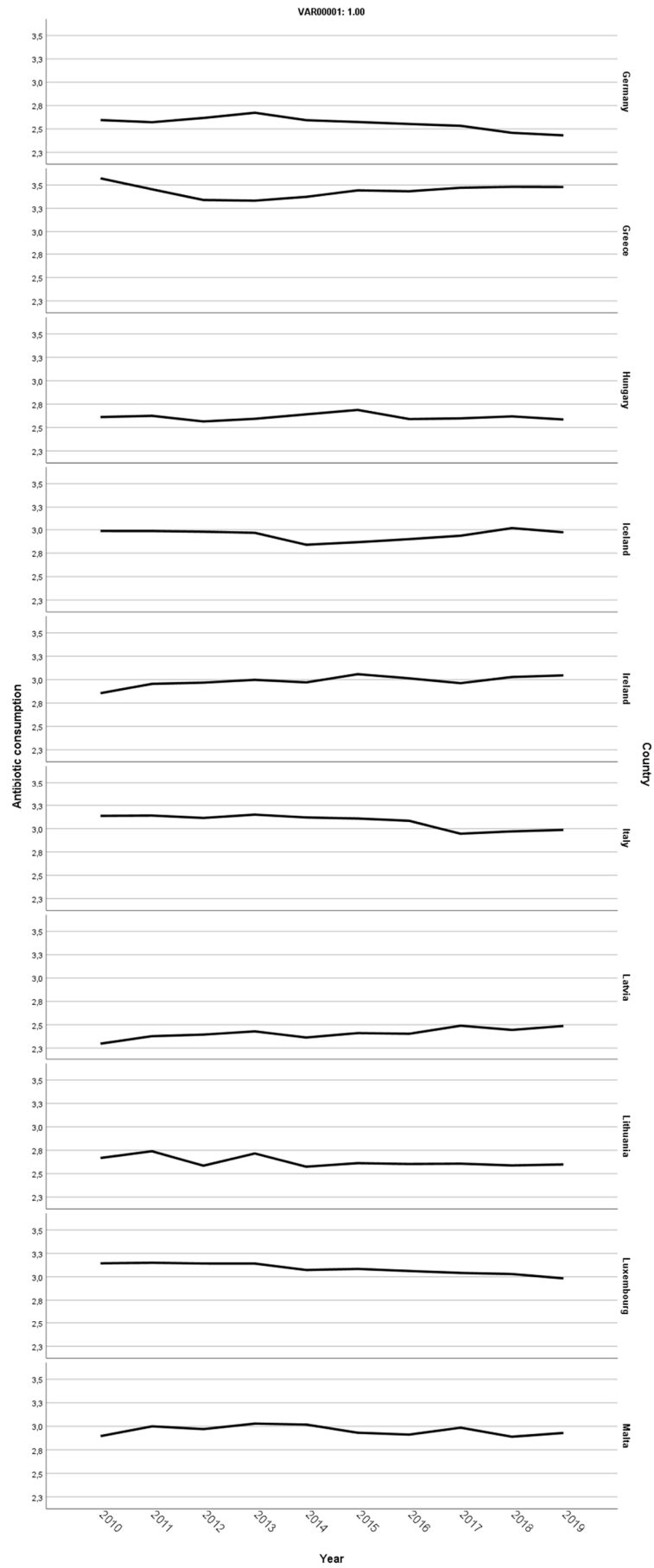


Figure S4. Trends in antibiotic consumption between 2010-2019 across 30 European countries.





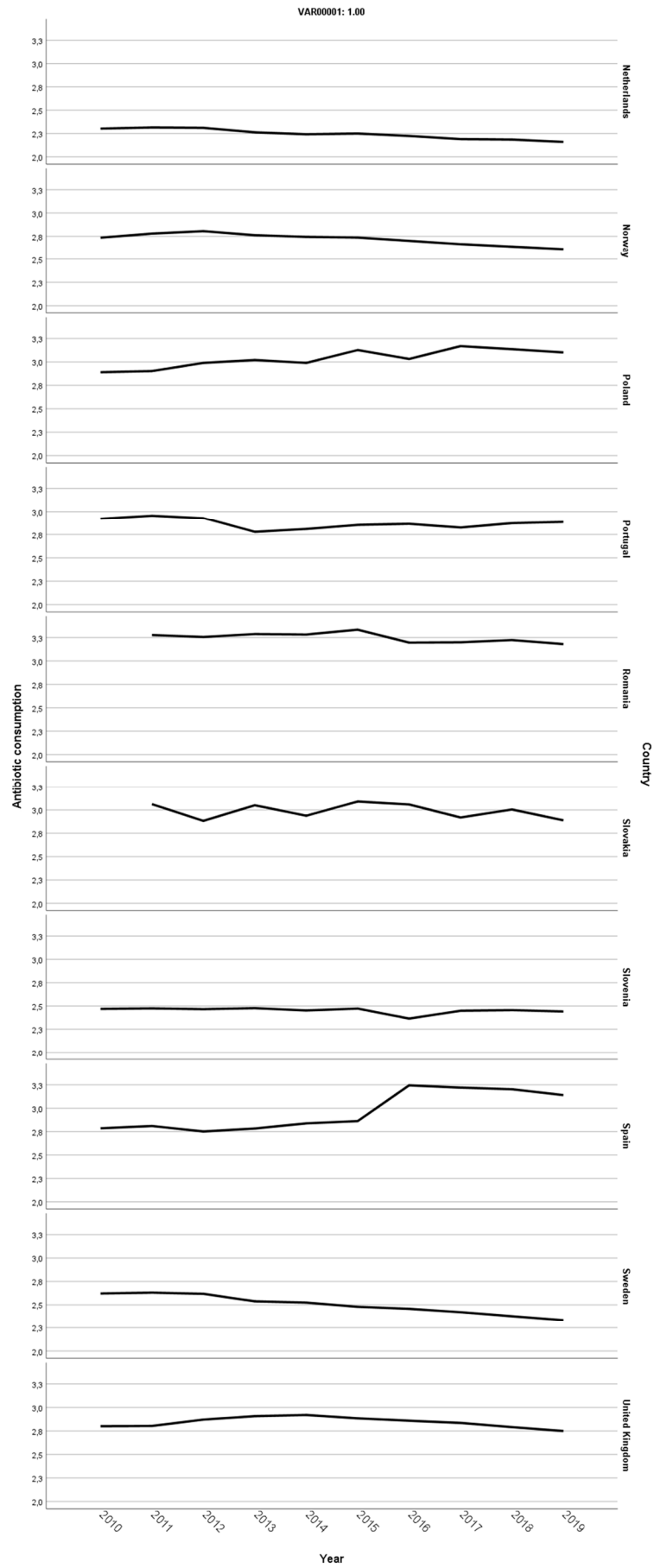
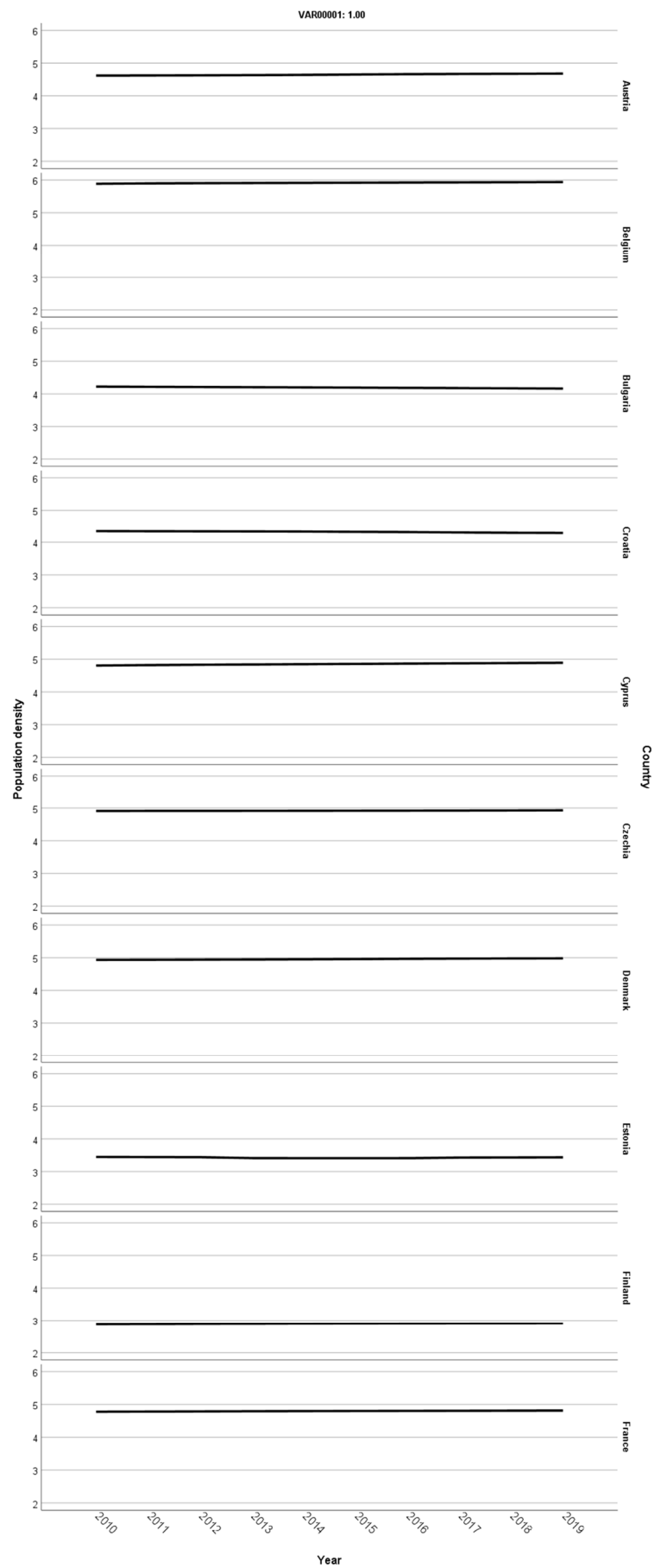
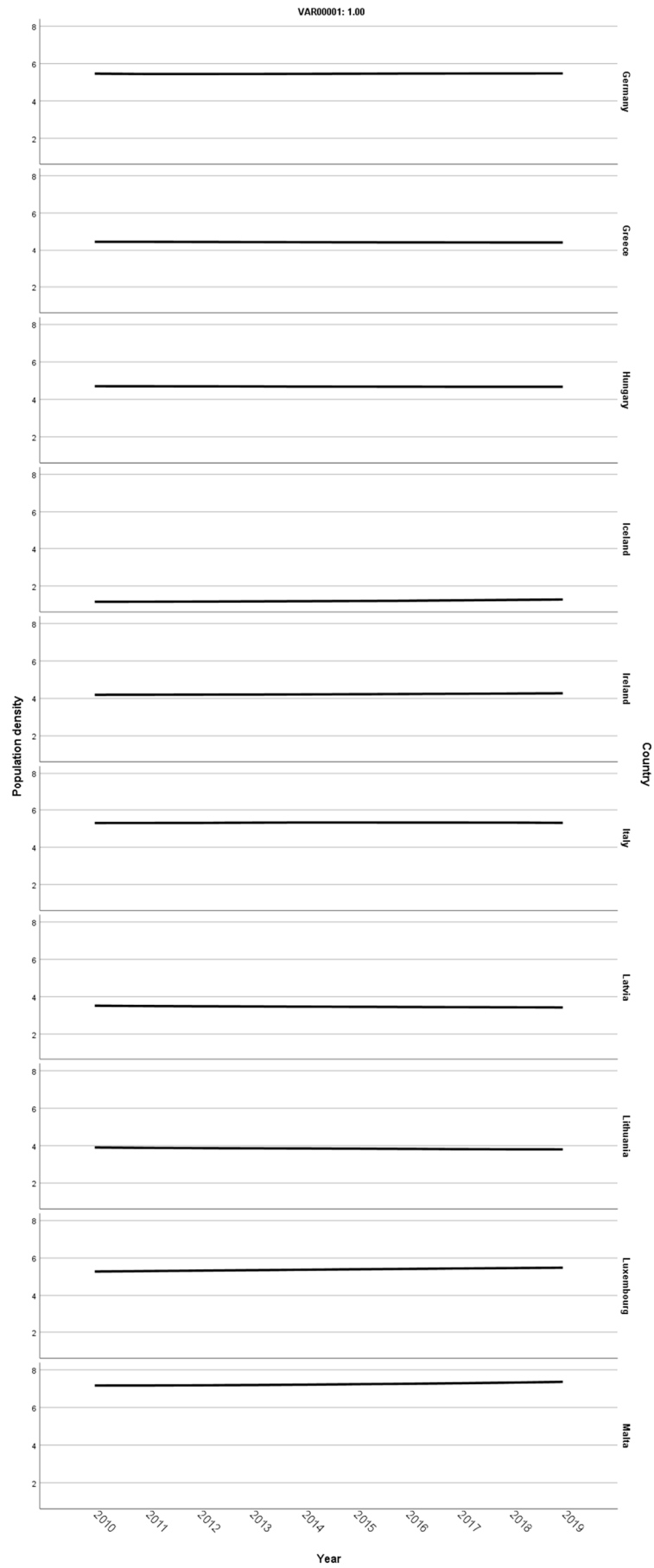


Figure S5. Trends in population density between 2010-2019 across 30 European countries.





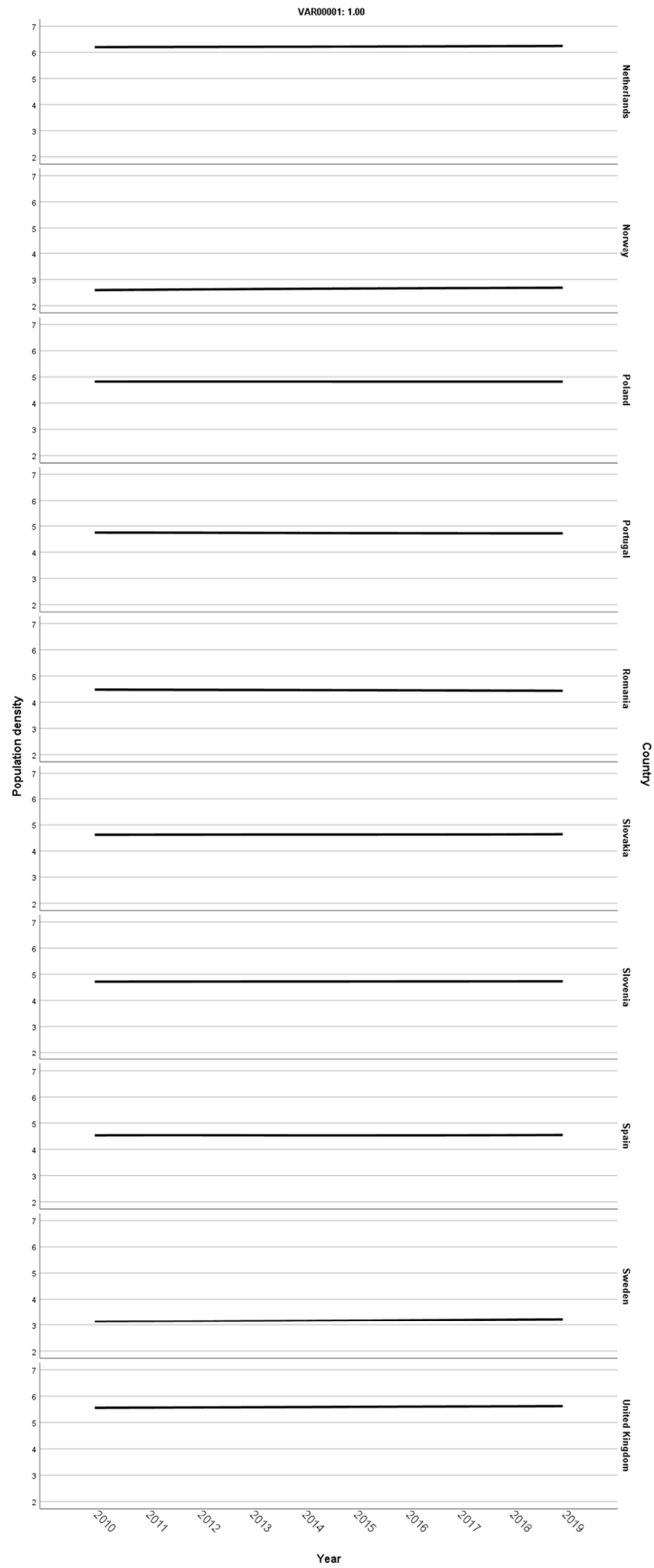


Figure S6. Association of antimicrobial resistance (normalized) with antibiotic consumption (A) and population density (B). Unadjusted weighted linear trend lines are shown.

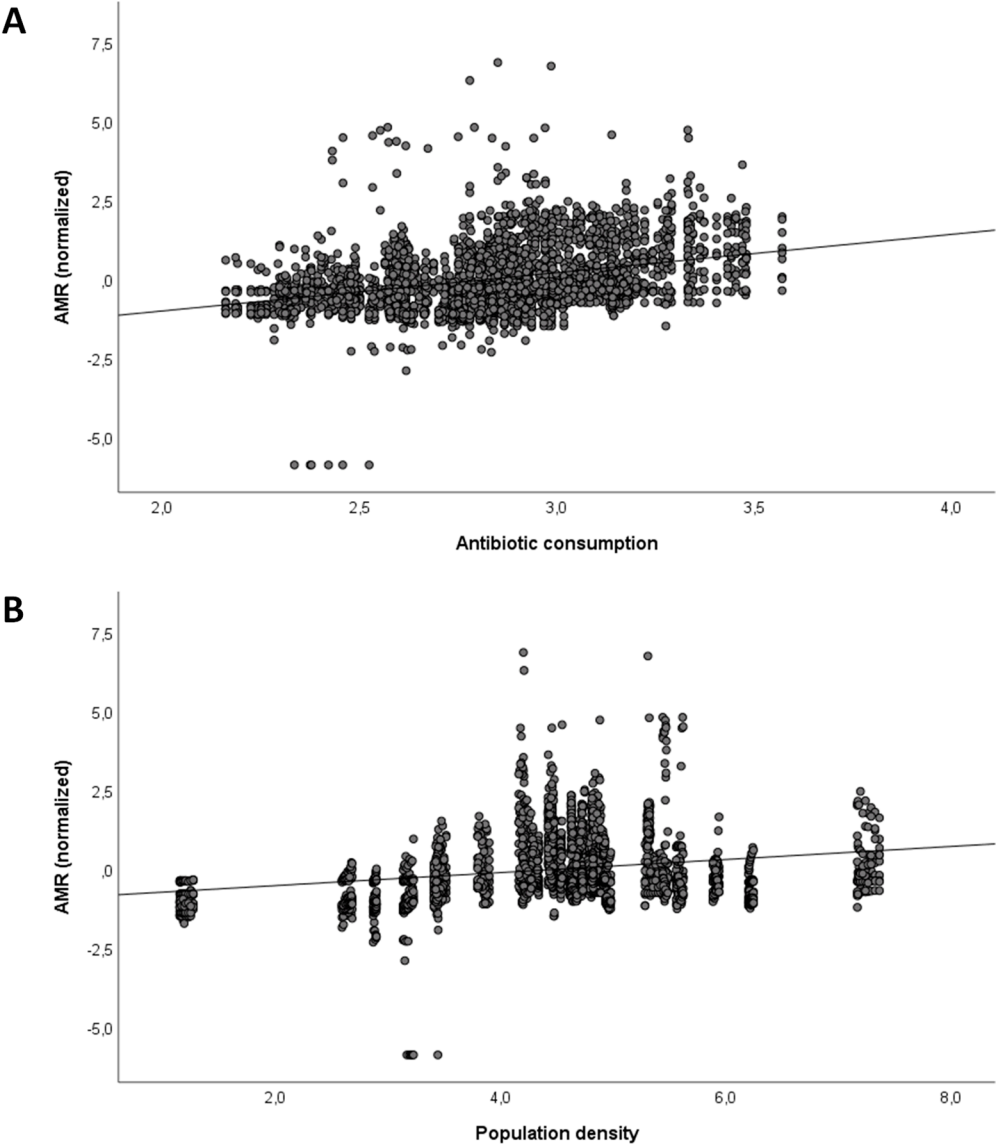
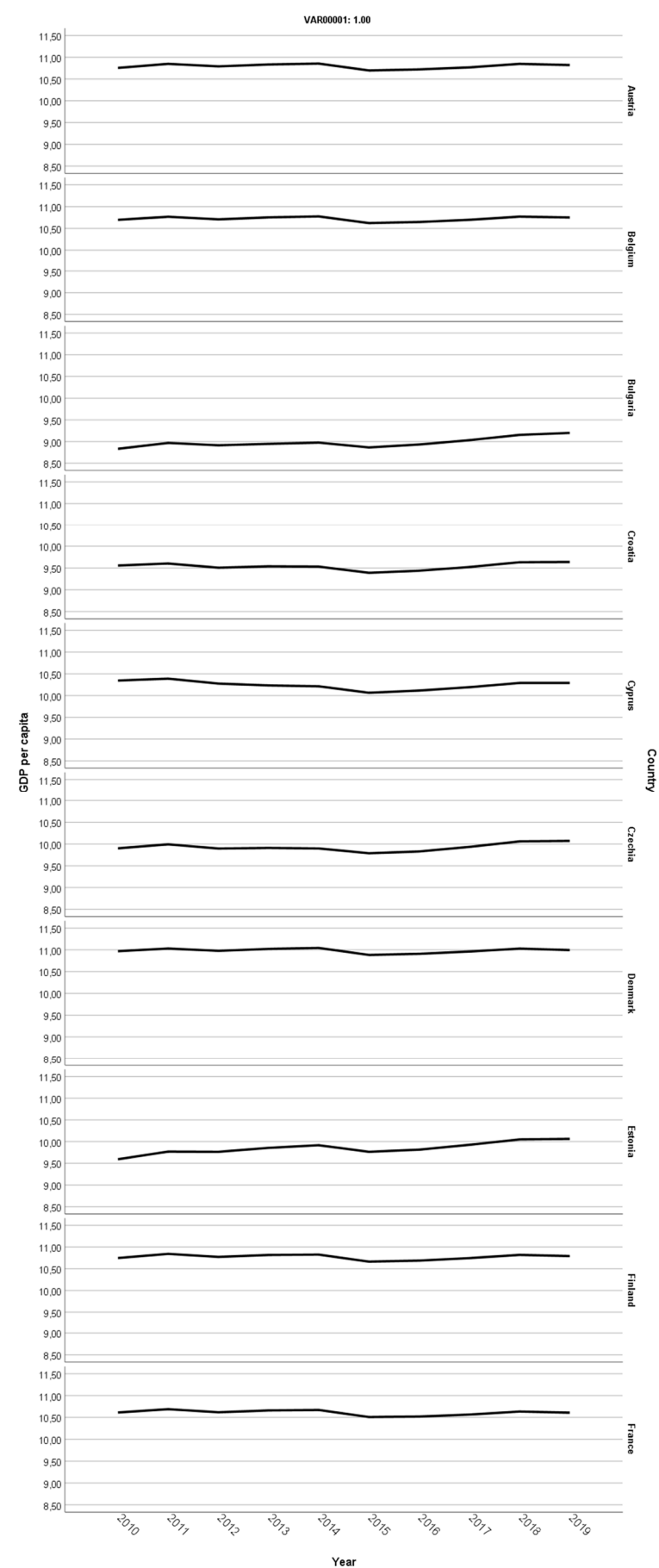
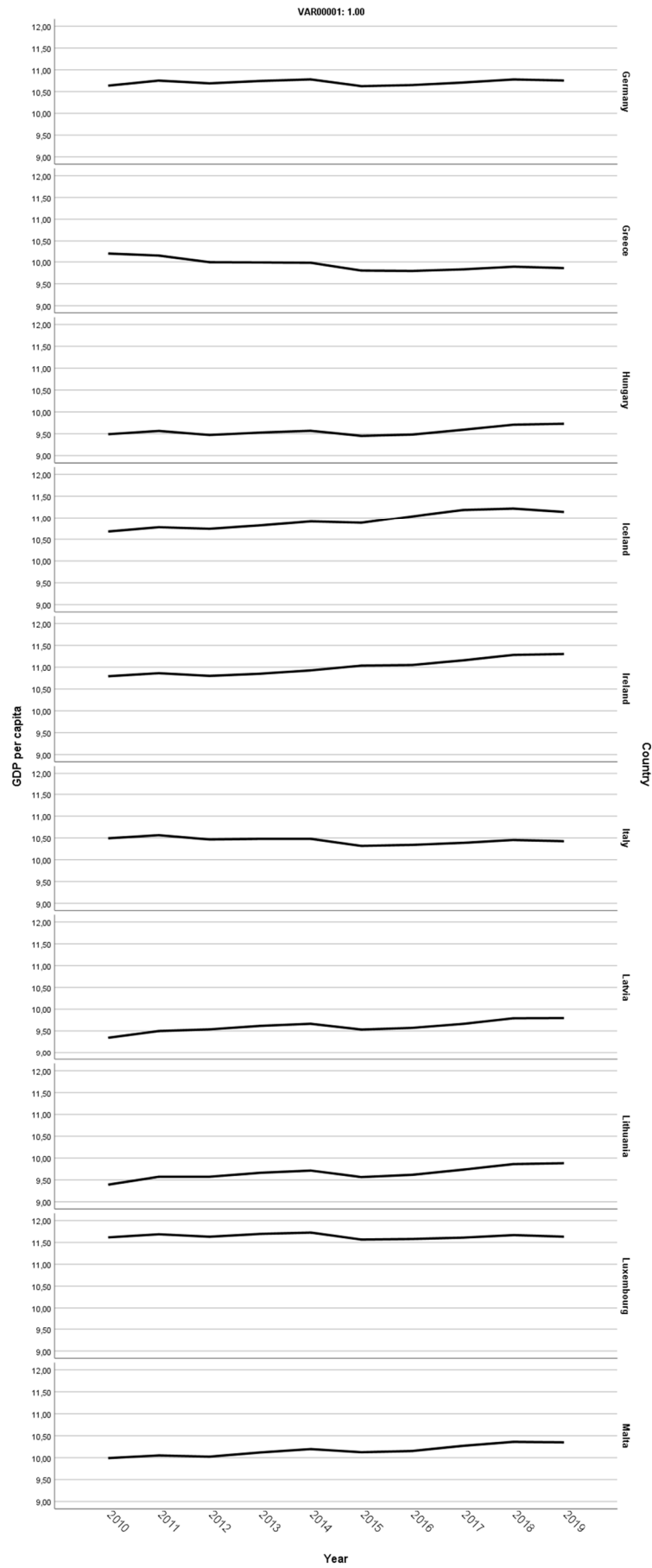


Figure S7. Trends in GDP per capita between 2010-2019 across 30 European countries.





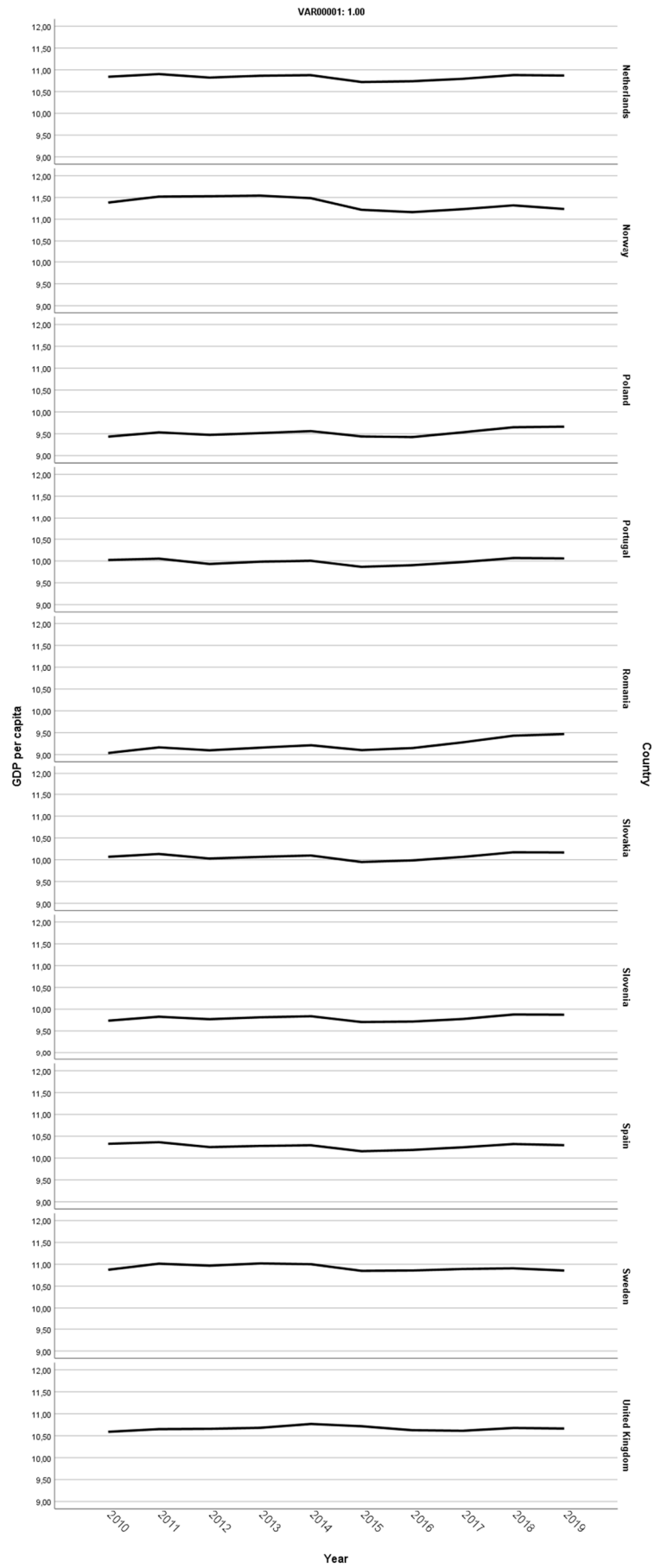
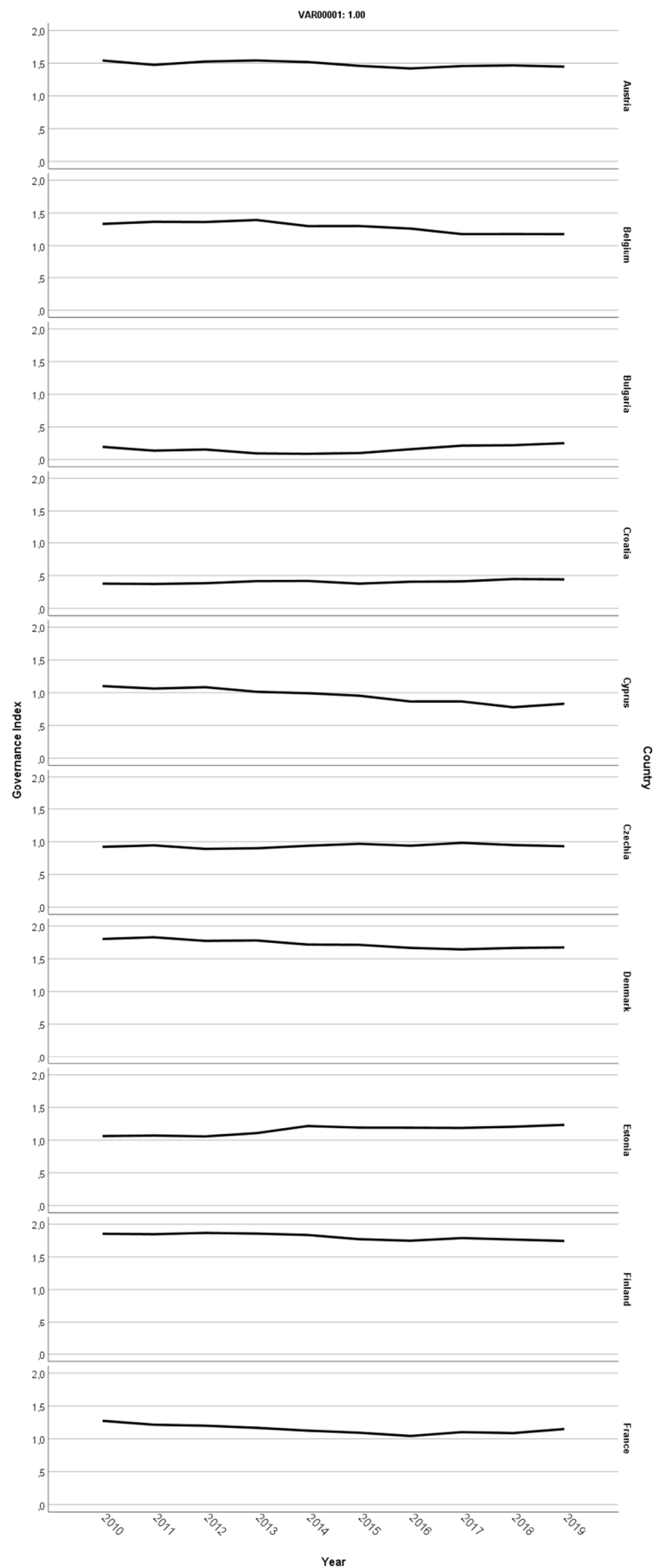
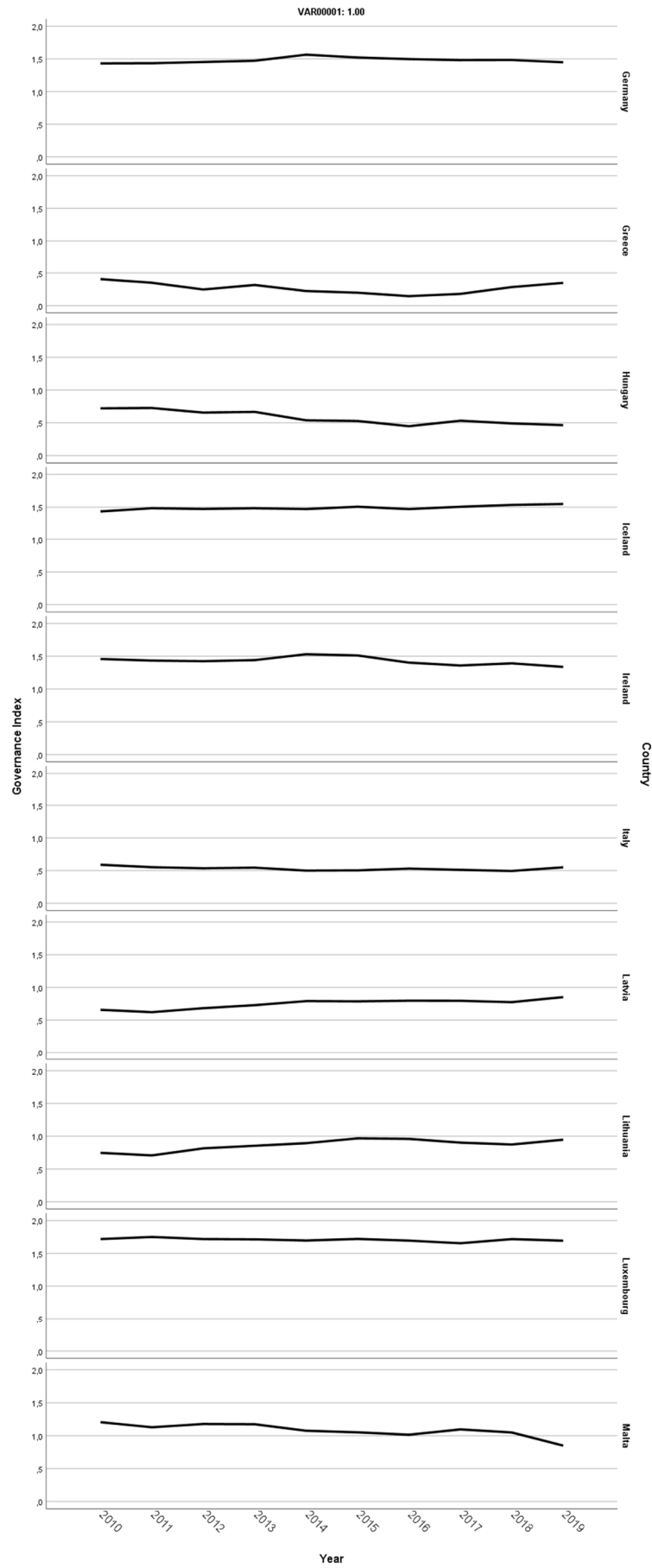


Figure S8. Trends in the governance index between 2010-2019 across 30 European countries.





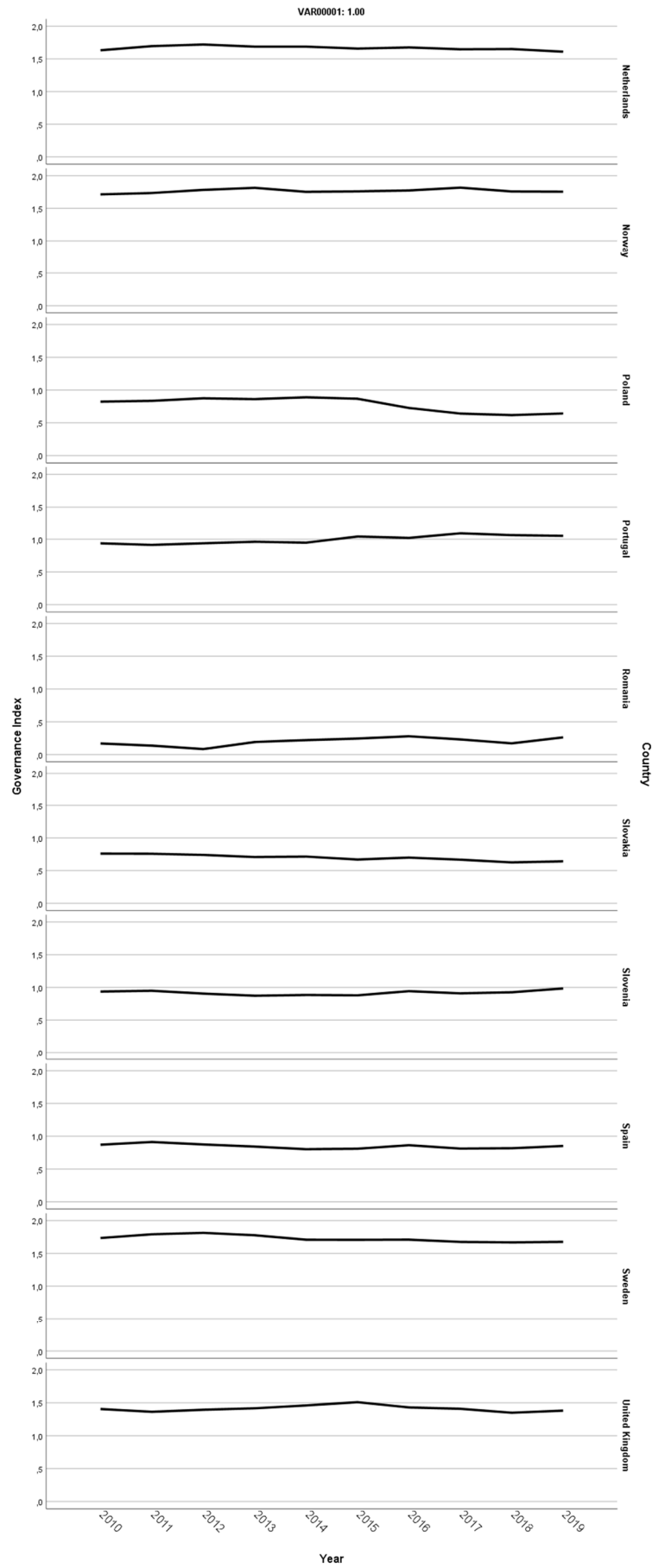


Figure S9. Association of antimicrobial resistance (normalized) with GDP per capita (A) and the governance index (B). Unadjusted weighted linear trend lines are shown.

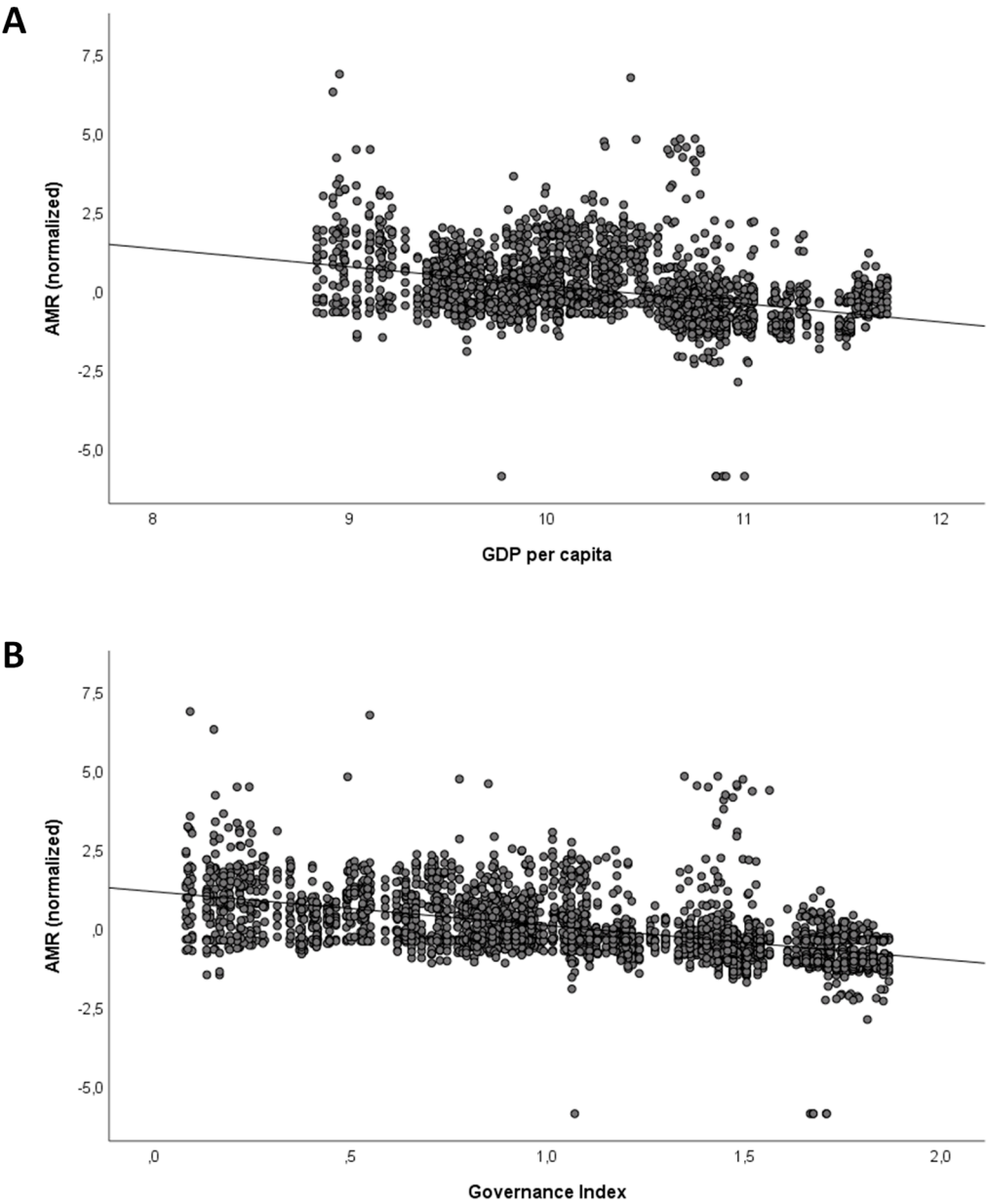


Table S1. Unadjusted and adjusted multivariable analyses to evaluate the linear relationship of antimicrobial resistance with temperature change and other predictors

Linear regression model	Coefficient (95% confidence interval)
Unadjusted	
Mean annual temperature change (°C)	0.042 (-0.016; 0.101)
Adjusted Model 1^a	
Mean annual temperature change (°C)	0.140 (0.039; 0.241)**
Year	0.032 (-0.001; 0.065)
Interaction	-0.010 (-0.030; 0.010)
Antibiotic consumption in the community (DDD/1,000 inhabitants/day)	1.163 (1.044; 1.282)***
Population density (persons/km ²)	0.165 (0.135; 0.196)***
Adjusted Model 2^b	
Mean annual temperature change (°C)	0.027 (-0.064; 0.118)
Year	0.051 (0.022; 0.081)**
Interaction	-0.017 (-0.035; 0.001)
Antibiotic consumption in the community (DDD/1,000 inhabitants/day)	0.506 (0.366; 0.646)***
Population density (persons/km ²)	0.143 (0.116; 0.170)***
GDP per capita (current US\$)	0.093 (-0.022; 0.209)
Governance Index	-1.043 (-1.207; -0.879)***

Abbreviations: DDD, defined daily dose; GDP, gross domestic product.

For interpretability, year was zeroed at baseline (2010) and a natural log transform was applied to antibiotic consumption, GDP per capita, and population density to improve linear fit.

^a Coefficients with 95% confidence intervals) were adjusted for country, mean annual temperature change, year, antibiotic consumption, population density, and the interaction between year and temperature change.

^b Coefficients with 95% confidence intervals) were adjusted for country, mean annual temperature change, year, antibiotic consumption, population density, GDP per capita, governance index, and the interaction between year and temperature change.

*** $p < 0.001$; ** $p < 0.01$