5 Contextualising the impact of the COVID-19 pandemic within the European Union

The wide-ranging evidence accumulated in this book contests the value of comparisons based on a single dimension of the pandemic in a small number of EU member states, or with other countries in the world, if the statistics fail to take account of context. By drawing together the contextual dimensions examined in each of the preceding chapters, this chapter identifies overlapping clusters of countries that share comparable input variables – socio-demographic and epidemiological risk factors and policy settings – with a view to uncovering similarities and differences in outcomes as measured by COVID-19 cases and deaths. Granular analysis captures the great diversity of possible explanatory factors concealed within any single set of statistics or within clusters of countries. It shows that many of the factors considered to explain outcomes in specific spatial and temporal circumstances do not necessarily have the same explanatory value elsewhere. The implication is that certain policy interventions would not readily be transferable to different policy settings, at international, national or local levels, without contextually informed adaptations.

Contextualising COVID-19 cases and deaths

The chapters in this book have explored the multiplicity of socio-demographic, epidemiological and policy settings in which COVID-19 was to reach pandemic proportions in Europe. Each chapter contributes cumulatively to evidence about the importance of taking account of contextual dimensions when seeking to explain how different countries and clusters of countries performed in response to the unprecedented challenges posed by the pandemic for democratic societies. This chapter reviews the changing situation during the period when Europe was the epicentre of the pandemic. It begins by examining the progression of the disease within Europe before exploring the factors influencing and containing its spread in different clusters of countries (Figure 5.1).

In most of the EU member states that were among the first to be affected by the outbreak of the pandemic, and where the numbers of COVID-19 cases and deaths were relatively high, initially only deaths in hospitals were counted. The numbers subsequently increased rapidly when deaths in the community, especially in care homes, were included, and in countries

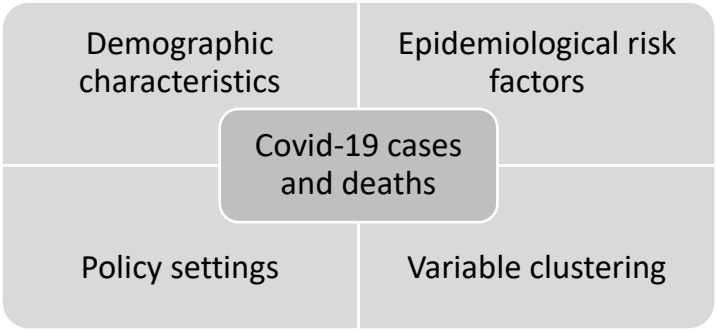

Figure 5.1 Clustering dimensions of Covid-19 cases and deaths

counting deaths where COVID-19 was the probable as well as the confirmed cause (Table 2.3).

Notwithstanding intractable issues of reliability and accuracy, statisticians used absolute figures for daily COVID-19 cases and deaths during the pandemic to monitor its progression and to inform policy decisions. A central tenet in this book is that, if international comparisons are to be meaningful, the statistics being compared need to be related to population size (per million inhabitants). Table 5.1 uses full dataset for the numbers of cumulative cases and deaths per million inhabitants for EU member states to illustrate the progression of the pandemic between 17 May (Table 2.2) and 17 July 2020, when the epicentre had moved from Europe to the Americas. By that time, only small numbers of new cases and deaths were being reported in the EU, although no member state recorded zero active cases, and new outbreaks were occurring in countries where the pandemic had largely been brought under control (Table 3.2).

Comparison of the death toll across the two dates shows that the four countries displaying the highest death rates per million inhabitants at 17 May retained their positions at 17 July 2020. The five countries with the smallest numbers of cases and deaths also retained their positions in the lower part of the table. The number of cases reported between the two dates increased most markedly in Sweden, Luxembourg and Portugal.

To overcome the cumulative limitations of daily counts, various attempts have been made to calculate the number of excess deaths during the pandemic's peak periods by comparing deaths from all causes for specific age groups with the same period in earlier years. Analysis of aggregate EuroMOMO (2020b) Z-scores (Table 2.4) showed that excess mortality rates were highest in Spain and England (over 40 points) for their peak weeks, followed by Belgium, France and the Netherlands (over 20 points). By 17 July (week 25), only Belgium, Spain and Sweden were displaying excess death rates greater than 2.

Calculations of excess mortality suggest that the full impact of the pandemic could be much greater than that in the published daily cumulative figures for COVID-19 deaths. Rough estimates for the EU member states reporting the highest cumulative deaths per million inhabitants (Table 2.5) show excess deaths for the duration of the pandemic to be 50% higher than

Table 5.1 Cumulative cases and deaths per million inhabitants, 17 May, 17 July 2020

Cases 17 May		*Cases 17 July*		*Death 17 May*		*Deaths 17-Jul*	
Luxembourg	6291	Luxembourg	8438	Belgium	777	Belgium	845
Spain	5914	Sweden	7610	Spain	590	UK	664
Ireland	4877	Spain	6543	Italy	525	Spain	608
Belgium	4747	Belgium	5455	UK	508	Italy	579
Italy	3717	Ireland	5202	France	423	Sweden	554
UK	3540	Portugal	4685	Sweden	364	France	462
Sweden	2941	UK	4308	Netherlands	331	Netherlands	358
Portugal	2824	Italy	4032	Ireland	311	Ireland	354
France	2180	Netherlands	2997	Luxembourg	166	Luxembourg	177
Netherlands	2561	France	2663	Portugal	118	Portugal	165
Germany	2104	Germany	2409	Germany	96	Germany	109
Denmark	1875	Denmark	2265	Denmark	94	Denmark	105
Austria	1800	Austria	2139	Austria	70	Romania	102
Estonia	1334	Romania	1820	Romania	57	Austria	79
Malta	1237	Malta	1526	Finland	54	Hungary	62
Finland	1135	Estonia	1520	Slovenia	50	Finland	59
Romania	868	Finland	1316	Estonia	47	Slovenia	53
Czechia	790	Czechia	1271	Hungary	47	Estonia	52
Cyprus	758	Bulgaria	1173	Czechia	28	Bulgaria	42
Slovenia	705	Poland	1032	Poland	24	Poland	42
Lithuania	563	Croatia	984	Croatia	23	Czechia	33
Croatia	541	Slovenia	912	Lithuania	20	Croatia	29
Latvia	528	Cyprus	854	Bulgaria	16	Lithuania	29
Poland	482	Lithuania	699	Greece	16	Malta	20
Hungary	363	Latvia	625	Cyprus	14	Greece	19
Bulgaria	318	Hungary	443	Malta	14	Cyprus	16
Slovakia	273	Greece	378	Latvia	10	Latvia	16
Greece	270	Slovakia	357	Slovakia	5	Slovakia	5

Sources: Our World in Data (2020a, 2020b); Worldometer (n.d.c);.

expected in Spain, and around 40% higher in the UK, Italy and Belgium (Dale & Stylianou, 2020).

Throughout the period when the EU was the epicentre of the pandemic, Belgium remained the country with the highest death rates per million inhabitants, making it also the worst affected country in the world for this indicator. The high rate has been attributed to several factors. From the outset, Belgian authorities were including deaths in the community, especially in care homes, where it was reporting probable and confirmed deaths (Table 2.3), but this approach may only partially explain Belgium's persistently high daily mortality rate (Laborderie, 2020, p. 4). Many other factors need to be taken into account.

Demographic characteristics and COVID-19

Since the starting point for this study was to contest the validity of comparisons using absolute numbers of deaths in a small number of countries, Chapter 1 began by situating EU member states in relation to their socio-demographic characteristics focusing on population size and density. Chapter 2 considered the patterning of death rates in relation to population size and density as well as other geographical aspects of population distribution and social structure, with a view to identifying and explaining hotspots within countries. This section considers the combined impact of the various demographic factors that have been found to influence the course of the pandemic as it spread across EU member states (Figure 5.2).

Population size, density and urbanisation

Table 5.2 confirms that, as anticipated in Chapter 1, large population size is closely related to high death rates per million in the UK, Spain, Italy and France. This relationship is not found to apply in Germany and Poland, which display lower death rates in absolute and relative terms than might have been expected for their relatively large population size. Among the medium-sized countries, Belgium and Sweden report higher death rates than anticipated, whereas Romania, Greece, Czechia and Slovakia report relatively low death rates. The smallest countries, with below 5 million inhabitants, might be expected to display the lowest death rates, but Ireland and Luxembourg, Estonia and Slovenia report higher absolute and relative rates than anticipated for their population size.

The picture changes when death rates are considered in relation to population density. Here, Belgium and the Netherlands stand out as the countries with medium population size, but where high density is associated with high death rates, particularly in Belgium. The combination of large population size and high density in the UK and Italy also helps to explain their position among the countries displaying very high death rates, whereas

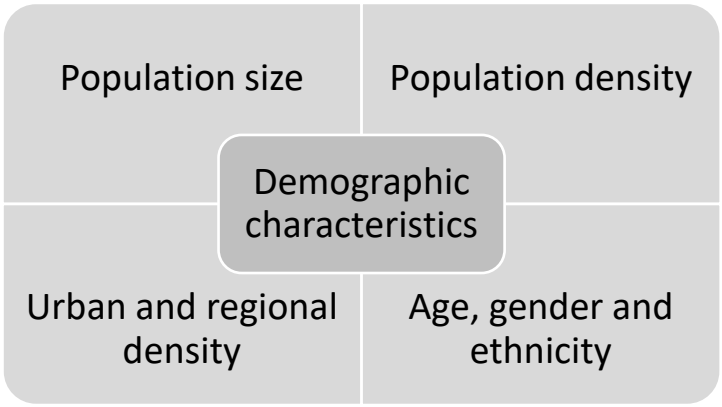

Figure 5.2 Demographic factors

Table 5.2 Covid-19 deaths in relation to population size (millions), density (km^2) and urbanisation (%)

Deaths 17 July		*Population size*		*Density*		*Urbanisation*	
Belgium	845	Germany	83	Malta	1548.3	Belgium	98.0
UK	664	France	67	Netherlands	504	Malta	94.6
Spain	608	UK	66.6	Belgium	375.3	Netherlands	91.5
Italy	579	Italy	60.4	UK	273.8	Luxembourg	91
Sweden	554	Spain	46.9	Luxembourg	235.1	Denmark	87.9
France	462	Poland	38	Germany	234.7	Sweden	87.4
Netherlands	358	Romania	19.4	Italy	202.9	Finland	85.4
Ireland	354	Netherlands	17.3	Denmark	138	UK	83.4
Luxembourg	177	Belgium	11.5	Czechia	137.7	France	80.4
Portugal	165	Greece	10.7	Poland	124	Spain	80.3
Germany	109	Czechia	10.6	Portugal	113	Greece	79.1
Denmark	105	Portugal	10.3	Slovakia	111.8	Germany	77.3
Romania	102	Sweden	10.2	Austria	107.1	Bulgaria	75
Austria	79	Hungary	9.8	Hungary	107	Czechia	73.8
Hungary	62	Austria	8.9	France	105.6	Hungary	71.3
Finland	59	Bulgaria	7	Slovenia	103	Italy	70.4
Slovenia	53	Denmark	5.8	Cyprus	94.4	Estonia	68.9
Estonia	52	Finland	5.5	Spain	93.1	Latvia	68.1
Bulgaria	42	Slovakia	5.5	Romania	84	Lithuania	67.7
Poland	42	Ireland	4.9	Greece	82.5	Cyprus	66.8
Czechia	33	Croatia	4.1	Croatia	73.2	Portugal	65.2
Croatia	29	Lithuania	2.8	Ireland	71	Ireland	63.2
Lithuania	29	Slovenia	2.1	Bulgaria	64	Poland	60.5
Malta	20	Latvia	1.9	Lithuania	44.7	Austria	58.3
Greece	19	Estonia	1.3	Latvia	30.4	Croatia	56.9
Cyprus	16	Cyprus	0.9	Estonia	30.4	Romania	54.0
Latvia	16	Luxembourg	0.6	Sweden	25	Slovenia	54.5
Slovakia	5	Malta	0.5	Finland	18	Slovakia	53.7

Sources: Eurostat (n.d.g): population density (km^2), 2018; Eurostat (n.d.h): population size (millions), 2019; United Nations (2018): urbanisation (% of territory).

the same combination of demographic variables produces different outcome in Germany and Poland for death rates. In France, large population size in combination with a lower ranking for density is associated with a relatively large number of deaths. The two smallest countries, Luxembourg and Malta, combine small population size with high density but with different outcomes: Luxembourg reports a much higher death rate than Malta. Denmark's relatively small size is accompanied by relatively high density and an intermediate position for COVID-19 deaths. The two medium-sized countries with the lowest densities, Finland and Sweden, also display different outcomes in terms of the numbers of deaths.

As the pandemic progressed, evidence became available enabling the identification of areas where hotspots were located and could be targeted by policy measures. As shown in Table 5.2, countries with persistently high death rates, the UK, Spain, Italy and France, display different levels of urbanisation, as defined with reference to agglomerations of more than 2,500 inhabitants. Belgium and the Netherlands, the two countries with the highest density overall, combine high COVID-19 death rates per million with very high rates of urbanisation. Several of the smaller countries with low death rates, Slovenia, Slovakia, Croatia, display low levels of urbanisation despite higher levels of overall density. Luxembourg and Ireland report similar death rates but different population sizes and urban densities. Despite their overall relatively low population density, Finland and Sweden display high rates of urbanisation due to the concentration of population in a small number of urban areas, but, as noted above, with very different death rates. Malta belies expectations: its death rate remains low despite its high urban density.

The impact of urbanisation is also determined by its regional spread. Analysis by Tallack et al. (2020) found that, in the UK excess death rates were greater than 30% in all its regions and nations. The authors attribute this patterning not only to the UK's greater overall population density but also to the greater dispersion of densely populated regions across the UK compared to Italy, Spain and France. London was initially the worst affected region in the UK. At the peak of the pandemic, excess deaths were more than 240% higher than usual, but subsequently other regions became hotspots. Aron & Muellbauer (2020) attribute the high and early peak in the UK to the London-centric location of the infection and the capital's international connectedness.

Similarities and differences were found in regional concentrations in other countries reporting high COVID-19 death rates. In Italy, for example, the pandemic peaked in Venetia and Lombardy, both wealthier regions in the north of the country, Lombardy because of its industry and international connectedness, and Venetia its tourism. Areas to the south, despite urban concentrations in Rome and Naples, were largely unaffected. In Spain, the virus spread most widely and rapidly in the more densely populated and prosperous urban agglomerations in Catalonia and the Madrid region. Madrid and Lombardy experienced earlier and higher peaks than London and were hit harder (Tallack et al., 2020).

Although France and Germany reported similar numbers of COVID-19 cases overall, France recorded almost twice the number of COVID-19 deaths (Deshaies, 2020b). In France, COVID-19 cases and deaths were highest in regions in the north and northeast and in the Paris area, whereas the centre, west and southwest were relatively unaffected. In Germany, the pandemic had spread across the border from Italy into Bavaria and Baden-Württemberg, and to a lesser degree to North Rhine-Westphalia. The northern and former East German states were relatively unaffected. Other disparities were observed within both countries. Munich, for example, reported a relatively low case fatality rate (the proportion of COVID-19

deaths, compared to the total number of cases diagnosed), whereas in France, the Vosges, in the northeast, reported ten times more COVID-19 deaths than the Haute-Vienne in the centre of France for an equivalent number of cases (Deshaies, 2020a). Despite their shared industrial history, the level of urbanisation and the daily interchange of frontier workers, differences were found in the spread of the virus between Alsace and Lorraine, in the northeast of France, and Saarland on the other side of the border in Germany.

Finland, the least densely populated member state, consistently reporting relatively low COVID-19 cases and deaths, is described as 'divided in two by the virus' (Petäistö, 2020, p. 19). The Helsinki metropolitan area accounted for three times more deaths than the rest of the country. In Estonia, a small, low-density country, the relatively higher number of cases and deaths was attributed primarily to an outbreak concentrated on the island of Saaremaa (ERR News, 2020). These comparisons confirm that the impact of urbanisation on the spread of the virus is not systematic or uniform across member states. Different combinations of demographic factors are needed to explain why ostensibly similar population sizes and densities produce different outcomes.

Age, gender and ethnicity

Readily accessible recent datasets are not available for age, gender and ethnicity variables across all member states. The few datasets that have been located provide clues as to why infection and death rates may be higher in some countries and regions than in others.

Compared to other epidemics, scientists have observed that older people are much more likely than younger age groups to die from COVID-19 (Petersen et al., 2020). In Chapter 1, old-age dependency ratios (population aged over 65 in relation to total population) were found to be largest in Italy, Finland and Greece (Figure 1.1). EuroMOMO (2020b) indicators for excess deaths at different ages in 17 EU member states (Table 2.4) show that, in the peak weeks for the population aged over 75, Spain (over 40 points) reached the highest score, despite its relatively low position for old-age dependency. England (almost 30 points) was in second place, also with a relatively low old-age-dependency ratio, followed by Belgium and France (20 points). The Netherlands and Italy were lower down the score board. The two other countries with high dependency ratios, Finland and Greece, were even further down the table.

No complete datasets were available for all EU member states showing gender differences in the propensity to contract the virus and to die from it. Data collated by UN Global Health (2020) at 25 June 2020 suggest that women were more likely than men to contract the disease in all but six of the EU member states covered in the survey (Czechia, Greece, Latvia, Luxembourg, Portugal and Romania). Women were less likely than men to die from the virus, except in Belgium, Estonia, Finland, Ireland and Slovenia. An analysis of the gender differential by age, carried out for the European

Commission in selected countries (Goujon et al., 2020, p. 5) also captured gender differences in positive COVID-19 cases. More cases were notified among men aged 55 to 80 years compared to women, while higher numbers of positive cases were reported among women aged 15–55 years and above 80. Across the seven countries analysed in detail – Italy, Belgium, Spain, Austria, the Netherlands, Germany and Portugal – Italy displayed the greatest propensity for men in the 55–80 age group to contract the disease compared to women. The difference was least marked in Portugal. Case fatality rates confirmed the male 'disadvantage', particularly for the age group 65–70.

Few EU member states collect information about COVID-19 deaths by ethnicity, generally for legal reasons. Where data are available for this variable, studies suggest that ethnic origins could be a contributing factor in explaining why some population groups were more likely to contract the disease and die from it. In the UK, for example, where the question has been most extensively studied, a review of inequalities in British society by the Institute for Fiscal Studies, an independent thinktank, confirmed that some ethnic groups were being disproportionately affected by the pandemic (Platt & Warwick, 2020). They found that per capita COVID-19 hospital deaths were highest among the black Caribbean population, and three times those of the white British majority. Other minority groups, including Pakistanis and black Africans, were found to be recording similar numbers of hospital deaths per capita to the population average, while Bangladeshi fatalities were lower.

Data for deaths in France from all causes indicate that, during the pandemic, excess death rates among people born outside France increased by more than 50% among immigrants from the Maghreb (where most immigrants are born), by over 100% for those born in another African country, and over 90% from Asia-born immigrants, compared to 22% for French-born inhabitants (Papon & Robert-Bobée, 2020). Other studies suggest that higher rates of COVID-19 cases and deaths among ethnic minority groups are largely attributable to the risks associated with their relatively poor living and working conditions (Brandily et al., 2020).

Epidemiological risk factors and COVID-19

Public health covers all organised measures, whether public or private, at supranational, national or subnational levels, to prevent disease, promote health, and prolong life for the whole population. The previous section demonstrated the value of situating comparisons in relation to the key demographic indicators examined in Chapter 1. The chapter also examined national health systems, public health capacity and health determinants in the expectation that, in combination with living and working conditions, they would contribute to, or mitigate, epidemiological risk factors (Figure 5.3).

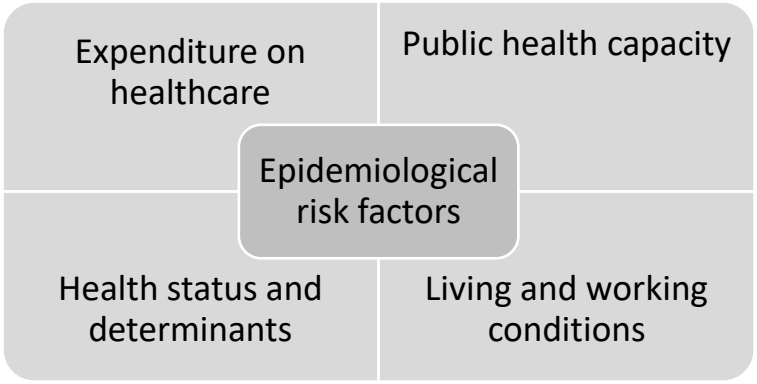

Figure 5.3 Epidemiological risk factors

Expenditure on healthcare and public health capacity

Table 5.3 shows the relationship between healthcare expenditure in purchasing power standards (PPS), public health capacity and case fatality rates. Public health capacity is assessed by selected indicators for curative care beds in hospitals, preventable deaths per 100,000 inhabitants prior to the pandemic and by testing capacity at 17 July 2020.

At that time, France, the UK, Belgium, Italy, Hungary, the Netherlands and Spain were still reporting case fatality rates above 10%, whereas rates in Cyprus, Slovakia, Slovenia and Malta remained very low. The high rate in France was associated with relatively high spending on healthcare and low numbers of preventable deaths, but a low number of curative care beds in hospitals, in the period preceding the pandemic. The UK, Italy, Spain and Sweden ranked below France for per capita healthcare expenditure, although Italy, Spain and Sweden were performing relatively well in preventing premature deaths. Germany's high spending per capita and generous provision of curative care beds was not matched by a low preventable death rate or a very low case fatality rate. Nor are the low case fatality rates for Cyprus, Slovenia, Slovakia and Malta closely associated with any of the variables for healthcare capacity before the pandemic.

Although relatively high levels of unmet need were reported in some countries (Figure 1.4), few governments were prepared for the unprecedented demand during the pandemic. Information is not available across the EU about the supply of ventilators and personal protective equipment (PPE) in the early months of the pandemic, except to signal shortages. In Italy, the healthcare system in Lombardy was overwhelmed, which may have contributed to the spread of infection across hospitals and the large number of deaths among patients and staff (Charmelot, 2020, p. 27).

Data about testing capacity can be more easily accessed but is also subject to numerous caveats (Chapter 2, Table 2.2). The capacity to carry out diagnostic testing became widely considered as an important means of controlling the spread of the virus when associated with effective tracing and isolation. Table 2.2 included information about both absolute numbers

Table 5.3 Per capita spending, curative care beds, preventable mortality, case fatality rates and testing

Per capita spending in PPS		*Curative care beds per 100,000*		*Preventable deaths per 100,000*		*17 July 2020*			
						Tests per million		*Case fatality rate*	
Germany	4.3	Bulgaria	617	Italy	175	Luxembourg	502830	France	17.3
Austria	3.9	Germany	602	Spain	182	Malta	248050	UK	15.4
Sweden	3.9	Lithuania	547	Cyprus	185	Denmark	222832	Belgium	15.4
Netherlands	3.8	Austria	545	Sweden	185	UK	186588	Italy	14.4
Denmark	3.7	Romania	525	France	191	Lithuania	175026	Hungary	13.9
France	3.6	Belgium	501	Netherlands	195	Cyprus	148771	Netherlands	12.0
Luxembourg	3.6	Slovakia	491	Luxembourg	204	Portugal	138644	Spain	10.9
Belgium	3.5	Poland	485	Ireland	205	Spain	128892	Sweden	7.3
Ireland	3.4	Hungary	427	Malta	207	Belgium	121890	Ireland	6.8
Finland	3.0	Slovenia	420	Belgium	220	Ireland	107704	Romania	5.6
UK	2.9	Czechia	411	Portugal	222	Italy	100955	Greece	4.9
Malta	2.7	Luxembourg	378	Denmark	230	Latvia	93201	Denmark	4.7
Italy	2.5	Greece	360	Austria	232	Estonia	85933	Germany	4.5
Spain	2.4	Croatia	351	Greece	236	Germany	82159	Finland	4.5
Czechia	2.1	Estonia	345	Finland	239	Austria	80628	Lithuania	4.2
Slovenia	2.1	Cyprus	340	Germany	241	Sweden	67494	Poland	4.1
Portugal	2.0	Latvia	330	UK	241	Slovenia	57426	Austria	3.7
Greece	1.7	Portugal	325	Slovenia	267	Czechia	57017	Bulgaria	3.6
Cyprus	1.7	Malta	318	Czechia	323	Finland	53220	Portugal	3.5
Slovakia	1.6	France	309	Poland	355	Poland	49838	Estonia	3.4
Lithuania	1.6	Netherlands	292	Croatia	370	Romania	47111	Croatia	3.0
Estonia	1.6	Finland	280	Estonia	385	Netherlands	44588	Latvia	2.6
Hungary	1.5	Ireland	277	Slovakia	417	Slovakia	43184	Czechia	2.6
Poland	1.4	Italy	263	Bulgaria	422	France	39868	Luxembourg	2.2
Croatia	1.3	Denmark	254	Lithuania	487	Greece	38227	Cyprus	1.8
Bulgaria	1.3	Spain	247	Hungary	506	Hungary	31343	Slovakia	1.4
Latvia	1.2	UK	211	Romania	512	Bulgaria	28287	Slovenia	1.4
Romania	1.0	Sweden	204	Latvia	521	Croatia	24224	Malta	1.3

Sources: Eurostat (n.d.j): treatable and preventable mortality (per 100,000 inhabitants); Eurostat (2020b, table 1): per capita spending (in PPS), 2017; Eurostat (2020e): curative care beds in hospitals (per 100,000 inhabitants) 2018; Our World in Data (2020a): case fatality rates; Worldometer (2020, n.d.b): tests per million 17 July 2020.

of tests carried out and the numbers per million inhabitants for all EU member states at 17 May 2020. Table 5.3 shows relative positions for tests per million inhabitants at 17 July 2020. Data were not available at either date for all member states to show what proportion of the population was being tested. Comparison of the number of tests per million between countries would suggest that some of the smaller countries, Malta, Luxembourg,

Lithuania and Cyprus, were probably testing larger proportions of their populations at both dates and doing so repeatedly. The Netherlands, Hungary, Croatia, Greece and Bulgaria consistently practised a low testing regime. Rates increased everywhere as testing capacity was built up, including in countries where it was already high. The UK moved furthest up the table as the government extended its testing regime. As in many other countries, priority continued to be given to essential workers and categories most at risk of contracting or transmitting the disease.

Luxembourg continued to be the country reporting the largest numbers of tests per million inhabitants, as well as the largest numbers of cases (Table 5.1). The substantial increase in the amount of testing in the UK between the two dates did not result in a change in its position for the number of confirmed cases. The countries reporting the smallest numbers of tests at both data points continued to report relatively low numbers of cases. These findings could mean that diagnostic testing does not capture mild or asymptomatic cases, and/or that relatively few new cases of infection were occurring or being reported. The doubling of the number of cases in Bulgaria, Poland and Romania between the two dates could be attributable to the increase in testing.

The case fatality rates displayed in Table 5.3 show that, with the exception of Hungary, the seven countries with rates over 10% were those reporting the highest death rates per million inhabitants at 17 July (Table 5.1). Conversely, the countries with low case fatality rates, with the exception of Luxembourg, reported some of the lowest death rates per million. The European Centre for Disease Prevention and Control (ECDC, 2020c, p. 9) cites a case fatality rate of over 25% for long-term care facilities across the EU. While Austria, Denmark and Germany managed largely to keep the virus out of care homes, governments in France, Italy, Spain, Sweden and the UK, which reported high overall case fatality rates, were criticised in the media for endangering the lives of people in residential care homes. The figures for case fatality rates should be interpreted with extra caution since most countries counted probable as well as confirmed COVID-19 deaths in care homes (Table 2.3). Older people in care homes were frequently suffering from life-threatening underlying conditions. The virus may not have been the main cause of mortality, although it may have brought forward death from other causes (Comas-Herrera et al., 2020).

In sum, countries with higher funding per capita and public health capacity, when associated with lower rates of infection, should, theoretically, have been in a better position to deliver a higher standard of care, thereby avoiding high mortality rates, achieving low case fatality rates and rapidly flattening the pandemic curve. The analysis in this section suggests that these epidemiological conditions may be necessary but are rarely sufficient to explain the full impact of COVID-19.

Health status and determinants

Since the chances of dying from COVID-19 are known to be higher for people with underlying health conditions, healthy life expectancy at age 65 provides an indication of the general health of a population. Table 5.4 shows the number of years that people (women and men) aged 65 could expect to live in good health before the outbreak of the pandemic. At age 65 people in Sweden, Malta, Ireland, Germany, Spain, Denmark and Belgium could expect

Table 5.4 Health life years at age 65, one-person households, diabetes in adults and obesity in adults

Healthy life at 65+		*1-person 65+*		Diabetes adults %		Obesity adults %	
Sweden	15.7	Bulgaria	20.1	Germany	15.3	Malta	28.9
Malta	14.3	Denmark	18.2	Portugal	14.2	UK	27.8
Ireland	12.9	Estonia	18	Malta	12.2	Hungary	26.4
Germany	11.9	Lithuania	17.6	Spain	10.5	Lithuania	26.3
Spain	11.4	Latvia	17.6	Cyprus	10.4	Czechia	26
Denmark	11.3	Finland	16.6	Czechia	10.2	Ireland	25.3
Belgium	11.1	Sweden	16	Austria	9.7	Bulgaria	25
France	10.8	Hungary	15.9	Hungary	9.3	Greece	24.9
UK	10.4	France	15.8	Finland	9.2	Croatia	24.4
Bulgaria	9.8	Romania	15.8	Slovakia	9.1	Spain	23.8
Netherlands	9.7	UK	15	Denmark	8.8	Latvia	23.6
Finland	9.5	Croatia	15	Romania	8.8	Poland	23.1
Italy	9.5	Germany	14.9	Bulgaria	8.3	Luxembourg	22.6
Luxembourg	9.1	Italy	14.9	Italy	8.3	Romania	22.5
Poland	8.5	Slovenia	14.6	Netherlands	8.1	Germany	22.3
Czechia	8.3	Czechia	14.5	Poland	8.1	Finland	22.2
Cyprus	7.5	Malta	14.4	Slovenia	7.8	Belgium	22.1
Austria	7.4	Belgium	13.9	France	7.6	Cyprus	21.8
Slovenia	7.4	Greece	13.6	Greece	7.4	France	21.6
Greece	7.3	Portugal	13.2	Latvia	7.4	Estonia	21.2
Portugal	7.3	Ireland	13	Sweden	7.2	Portugal	20.8
Hungary	7.2	Poland	13	Belgium	6.8	Sweden	20.6
Romania	6.1	Netherlands	12.6	Croatia	6.8	Slovakia	20.5
Lithuania	6	Austria	12.6	Luxembourg	6.5	Netherlands	20.4
Estonia	5.7	Spain	11.8	Estonia	6.2	Slovenia	20.2
Croatia	5	Slovakia	10.8	UK	5.6	Austria	20.1
Latvia	4.5	Luxembourg	9.9	Lithuania	5.4	Italy	19.9
Slovakia	4.4	Cyprus	6.5	Ireland	4.4	Denmark	19.7

Sources: Eurostat (n.d.e): healthy life years; Eurostat (2017): elderly persons living alone at 65 and over, 2017; Statista (2020): diabetes in adults (in %), 2019; World Population Review (2020): obesity in adults (in %), 2020.

to enjoy another 11 years or more of good health. By contrast, in Romania, Lithuania, Estonia, Croatia, Latvia and Slovakia, healthy life expectancy was below 6.1 years. The implication is that fewer people in the last group of countries were likely to live to the age of 80, the age above which they would have been most likely to die if they contracted the disease.

The main underlying conditions associated with high COVID-19 death rates (comorbidities) are known to be diabetes, hypertension, chronic lung disease and cardiovascular disease. Rates are shown in Table 5.4 for the prevalence of diabetes and obesity for the adult population aged 20–79 years in EU member states in 2019/2020. In Germany, the highest prevalence of diabetes in 2019 was associated with the highest number of diabetes-related deaths per 1,000 (Statista, 2020). Patients who are diabetic and/or obese have been found to be particularly vulnerable to complications if they contract the virus (Diabetes UK, 2020; World Obesity, 2020).

Recent studies provide evidence indicating that low-income groups are at greater risk of being infected not only due to their overcrowded living conditions, as noted above for ethnic minority groups. They are also likely to be in poorly paid public-facing jobs in the service sector, especially health and social care, as well as in retailing and home deliveries, hospitality, entertainment and public transport, which were most affected by lockdown, loss of income and insecurity. These factors combine with the high prevalence of obesity, diabetes and heart conditions associated with poor outcomes (Marmot, 2020). In the UK, for example, data from the Office of National Statistics on age-corrected mortality rates by location confirm much higher COVID-19-related death rates in crowded living conditions in areas with the greatest economic deprivation (Aron & Muellbauer, 2020; Platt & Warwick, 2020; Tallack et al., 2020). Similar findings have been reported in France (Brandily et al., 2020).

Analysis in Chapter 1 suggested that household size and composition (Figure 1.8) might be important factors determining exposure to COVID-19. Table 5.4 shows the proportion of older people living alone. If they are in good health and able to self-isolate, as in the Nordic and Baltic states, where intergenerational coresidence is unusual, older people living alone might be expected to be less exposed to the risk of contracting the disease. If they are in poor health and dependent on help and support from non-resident family or community carers, as in Bulgaria, Latvia and Lithuania, they are more likely to be exposed to the disease and to the psychological problems resulting from self-isolation. Where intergenerational coresidence and support are common living arrangements, as Italy and Spain, and in countries where multi-person households are associated with overcrowding in densely populated urban areas, the risk of contracting the disease from younger generations and dying from it is likely to be much greater. Research (Ehl et al, 2020) has suggested that the differences in transmission rates from relations between France and Spain, where COVID-19 death rates are similar, may be attributable to traditionally higher levels of inter-generational coresidence in Spain. Measures to prevent primary infections

among older people relying on physical distancing might, therefore, be more effective in countries with small households and more limited inter-generational coresidence.

Policy settings and COVID-19

Chapter 3 showed how governments in EU member states intervened to contain or eliminate the virus. Chapter 4 illustrated how knowledge about policy environments and administrative cultures contributes to an understanding of the performance of national governments and EU institutions as they dealt with COVID-19 and prepared for future pandemics.

Many difficulties were encountered in collating precise, reliable and comparable information about the relationship between policy settings and the impact of COVID-19 in EU member states. Problems arise not only owing to the lack of consistent data about the timing of the onset of COVID-19 and its peaks, but also because of variations in the speed and intensity with which measures were put in place and the severity of their application. Some EU member states made recommendations and issued advice, others introduced restrictive measures progressively and enforced them more or less stringently, while yet others declared an emergency and imposed draconian lockdown with penalties for non-compliance (Chapter 4). In many countries, the introduction of restrictive measures was found to be less controversial than decisions about lifting or easing lockdown, as governments, ministers of finance and health struggled with conflicting interests, pressures and advice and adapted their strategies, as well as their modes of governance, to prevent and contain new outbreaks.

In the years preceding the pandemic, Thijs et al. (2018) and the Bertelmann Stiftung (2019) constructed composite indicators for public administration capacity and performance, and for quality of democracy (Chapter 4). They identified Sweden, Finland and Denmark as the countries that might be most effective in managing the pandemic. Their findings suggested that, in Hungary, Romania, Bulgaria, Greece and Croatia, governments were likely to be less well prepared administratively to confront the outbreak (Table 4.1). France, the Netherlands and Polant displayed much lower rankings for democratic indicators than for administrative capacity. Germany, Greece, Latvia, Lithuania, Portugal and Slovenia were higher in the rank order for democracy than for administrative capacity.

None of the countries at the top of the governance rankings for the two composite indicators displayed high rankings for lockdown readiness or stringency of measures applied when the pandemic was at its peak. Denmark moved up the rankings for stringency in July (Table 3.2), and it was the only one of the three countries at the top of the rank order for public satisfaction with the measures taken during the pandemic (Table 4.3). Denmark was joined by Finland among the countries that placed more trust in their governments than in scientists for information about the pandemic. In terms of outcomes, Sweden was among the countries displaying some of the

highest figures for cases and deaths per million inhabitants, whereas Denmark and Finland maintained consistently lower positions in the rank order (Table 5.1).

All of the five countries with the lowest scores for governance indicators were in the medium range for speed of lockdown (Table 3.1). Bulgaria's and Hungary's relative positions increased for stringency of measures (Table 3.2). Croatia moved from being one of the countries with the most stringent measures to a position much lower in the rank order. Greece and Romania were positioned among the countries with medium rankings. Greece remained at the bottom of the rank order for cases and deaths throughout the pandemic, and Croatia was also among the lowest ranks (Table 5.1). Bulgaria saw its position move up the rank order, whereas Hungary was ranked lower for cases than for deaths. Croatians and Greeks were reasonably satisfied with their governments' performance during the pandemic, whereas Bulgarians, Hungarians and Romanians were least satisfied (Table 4.3). In none of the five countries did the public trust their government to provide reliable information about the pandemic, and in no country did the public place the EU among its three most trusted sources of information about the pandemic.

Analysis by lawyers of the legislative frameworks within which countries were operating during the pandemic highlighted the unevenness of responses across democracies as well as the challenges to their constitutional provisions. The boxes in Chapter 4 illustrated the diversity of legal instruments in each country, the changing distribution of legislative and executive powers, the shared responsibility for public health between central and regional governments, the legality of the measures implemented and the legal challenges faced by governments. In different combinations, these factors were found to affect the speed of their responses, the proportionality of the measures implemented and the outcomes in terms of COVID-19 cases and deaths.

Variable clustering during the pandemic

The great diversity of inputs and outputs made the task of comparing and contrasting the impact of the COVID-19 pandemic across the EU extremely complicated, since it was rarely possible to compare like with like, even over a small number of variables. The challenges of comparing dissimilar countries was already considerable without the additional problems of locating reliable and comparable datasets for all 27 EU members states and the UK, which was still included in most of the statistics for the European Economic Area if not for the EU. Scrutiny of compilations of datasets for EU member states tracking COVID-19 infections, deaths and testing illustrates how the positioning of different countries in frequently cited league tables varies depending, among others factors, on which countries are selected, how the data have been collected, reported and presented and, importantly, whether absolute or relative figures for tests, cases and deaths are being

compared. This section examines different clusters or subsets of countries that have been found to share common features in their approach to the pandemic to determine whether they share similar outcomes.

Waves of EU membership

When clustered according to the timing of their membership of the EU (Figure 1.9 and Table 4.1), each wave of new members is found to display different combinations of socio-demographic, epidemiological and political traditions. Countries were constantly changing their governments, internal structures and even population size, as the two Germanys were united, and internal and external migratory movements contributed to population growth and change. The original member states represented – and continue to represent – a broad spectrum of countries in terms of socio-demographic characteristics, public health indicators, political systems and COVID-19 outcomes. The new wave of membership in 1973 brought three countries sharing a different conception of social welfare from the founder members. In the third wave, the other three Southern European member states joined Italy with their legacy of autocratic regimes. The fourth wave further reinforced the social-democratic model of welfare, while wave five added eight Central and Eastern European countries with their shared experience of Soviet rule, as well as the two small island states, each with their own chequered histories and traditions. The final wave brought three more countries from Eastern Europe, where reform of their judicial systems remained to be completed.

After more than six decades, the longstanding divisions between the founding member states in their approach to social policy resurfaced during the pandemic (Hantrais, 2019, 2020a). Germany, the largest and wealthiest of the six original EU member state, is often cited as a country that was able to avoid the worst impact of the pandemic. In comparison to the other large member states in the first wave (France and Italy), Germany had the advantage of a well-resourced health system and the capacity needed to manufacture and stock large quantities of medical and protective equipment. The country unilaterally closed its borders with its neighbours, and temporarily imposed export bans on medical supplies (Hamann, 2020). It introduced early large-scale testing and contact tracing (Aron & Muellbauer, 2020). German federalism allowed the most severely affected regions, Bavaria and Saarland, to implement strict measures to contain the spread of the virus, while the Chancellor, Angela Merkel, exercised strong leadership. She appealed to citizens to comply with the measures imposed to protect the whole population, resulting in a high level of satisfaction with her management of the pandemic.

France, by contrast, as a unitary bureaucratic country, with its less well-resourced public health system, was able to implement nation-wide decisions rapidly, but with the disadvantage that the government did not focus on hotspots and was less able to control the pandemic than Germany.

Italy, the other large member state in this grouping, reached an early peak concentrated in its wealthier northern regions, resulting in one of the highest excess death rates, and incurring strong criticism of the government's response (Beqiraij, 2020; Charmelot, 2020). Belgium, which had a similarly high population size and density to the Netherlands, reported a much higher death rate per million, owing largely to the combination of political instability, the inability to coordinate its federal states and its problematic approach to reporting COVID-19 cases and deaths (Ganty, 2020; Laborderie, 2020). Luxembourg presented a different configuration from other founding member states. As one of the smallest but most densely populated and highly urbanised countries, with the lowest old-age-dependency ratio, a well-funded healthcare system and relatively high ratings for public administration, it reported the largest number of tests and cases but relatively low death rates. The government's response was criticised for its lack of clarity and direction (Stoppioni, 2020)

Herd immunity and frugality

A herd immunity or mitigation strategy, whereby a few countries introduced measures relying on voluntary compliance, is often contrasted with a more aggressive suppression strategy based on the implementation of a wide range of stringent measures, extending to limits on civil rights and liberties. Countries from the different waves of EU membership shifted between the two approaches, as their governments responded to the evolving pandemic.

When Europe became the epicentre of the pandemic, a few countries, the Netherlands, Sweden and the UK, deliberatively followed a herd immunity strategy in the expectation that transmission rates would be kept low if sufficient proportions of their population were allowed to become immune to the disease. In a national address on 16 March, the Dutch prime minister, Mark Rutte, announced that his country would not go into complete lockdown (Cohen, 2020). Instead the aim was to develop immunity by letting large numbers of people contract the illness at a controlled pace, while protecting vulnerable groups. Rather than opting for a national lockdown, with potentially negative consequences and uncertain benefits, the Dutch government attempted to build herd immunity gradually, by implementing an 'intelligent lockdown'. The prime minister acted as 'explainer-in-chief', and the government issued advice rather than orders (Buyse & de Lange, 2020). They left open the option of introducing additional measures later depending on how the virus developed. As the severity of the pandemic increased, and the government's approach began to be questioned, city mayors were authorised to issue and enforce emergency regulations, and to impose fines for non-compliance.

Like the Netherlands, the UK initially adopted a herd immunity strategy. Based on scientific advice, the UK government sought to balance 'the legitimate aim of protecting public health against the protection of civil liberties' (Grogan, 2020a). Policymakers followed rather than led public

behaviour, only to find that they were accused of being responsible for more COVID-19 deaths because they had not acted more quickly and decisively (Aron & Muellbauer, 2020). The approach adopted, despite disagreement between scientists and policy advisers, was based on the expectation that public compliance with a full lockdown would be difficult to achieve if maintained for a long period of time. As public opinion shifted, and the politicians appeared to be losing the initiative, between 12 and 16 March tactics changed (Freedman, 2020). By July, the UK was the country with the highest ranking for the stringency of its lockdown measures and was near the top of the rank order for its testing capacity.

Sweden's measures in response to COVID-19 have been reported internationally as exemplifying a preferable alternative to highly restrictive measures (Grogan, 2020b). In the absence of a vaccine, the Swedish government sought to achieve herd immunity by allowing a sufficient proportion of the population to be exposed to, and infected by, the virus. The government did not introduce strict bans on travel and public events and gatherings, or school closures. Like the Netherlands and the UK initially, they issued non-binding recommendations. The government's decision not to take more drastic legal measures has been explained partly by doubts about the legality of such measures under existing delegations of power (Cameron & Jonsson-Cornell, 2020). The advice from the Public Health Authority was that most people could be relied upon to follow recommendations. The government enjoyed a high level of social trust and, in return, the public complied, at least in the early stages of the pandemic, and the damage to the economy appeared to be less severe than elsewhere in the EU. The country was expected to reach herd immunity during May, but by July, with older people accounting for more than 85% of the rapidly growing COVID-19 death toll, the Swedish approach was being called into question (Mock, 2020).

These three countries had in common with Denmark their concern to involve civil society by enabling citizens to take the initiative at local level before introducing legal requirements to bring about changes in behaviour. As a small country with a relatively homogeneous population, without adopting a herd strategy, Denmark managed to combine 'extraordinary law making, and (lawful) suspension of individual rights' (Cedervall Lauta, 2020). Executive power was increased, while maintaining deaths at a level below that in the other three countries and without losing public support.

Denmark, the Netherlands and Sweden, which would have been joined by the UK had it remained in the EU, shared not only their concern to involve civil society in the decision-making process and to invoke the democratic concept of social responsibility. They also had in common that, with Austria they belonged to what came to be known as the 'frugal four'. They were all net contributors to the EU's budget. Together, they rejected the initial Franco–German proposal for a grant-based EU recovery fund involving borrowing on capital markets on an unprecedented scale. Having been identified as one of the countries responsible for the spread of COVID-19, Austria differed from the herd immunity countries in that, under pressure

from public opinion, the government adopted aggressive and early control strategies, when a Tyrolean ski resort was identified as a major hotspot for spreading the virus across Europe (Lachmayer, 2020). The government's 'common sense' approach was designed to contain the spread of the virus and avoid overburdening the health system (Sauer, 2020). As a result, the number of cases and deaths remained low, and public satisfaction with the government's handling of the pandemic was high.

Ireland also came close to adopting a herd immunity strategy. Like the UK, Ireland is not a member of Schengen, and it did not close its borders at the onset of the pandemic. Nor did the government initially introduce strict lockdown measures. Ireland managed to avoid resorting to emergency powers by stretching the meaning of the constitution (Greene, 2020). In relation to size and density, Ireland displayed higher death rates than might have been expected (Table 5.2). As a net contributor to the EU budget, by not joining the frugal four, Ireland lost the opportunity to obtain a rebate in the budget negotiations (McGuirck, 2020).

Southern and Eastern cohesion

The 17 countries belonging to the 'friends of cohesion' group (essentially the Southern and Central and Eastern European member states) formed another cluster in their response to the EU's plans for supporting the economic recovery. In the EU budget negotiations, they were looking for reassurances that they would not be left on the periphery. Italy and Spain were aggrieved at not being supported by their European neighbours as they struggled to cope at the peak of the pandemic. Their leaders reiterated the importance of continuing support for cohesion policy if the EU was to meet its aim of achieving greater economic and social convergence among member states. Portugal remained in the higher ranks of countries for COVID-19 cases but ranked lower for deaths. The Portuguese government adopted a cautious approach during the early stages of lockdown, stating that 'no restrictions to freedom of expression and freedom of the press would be allowed during the crisis' (Violante & Lanceiro, 2020). Greece distinguished itself from France, Italy and Spain by remaining among the countries with the lowest rates for COVID-19 deaths. It displayed low rankings for administrative performance, democratic governance and health policy indicators, but a relatively high level of public satisfaction with government (Karavokyris, 2020).

Within the friends of cohesion group, Czechia, Hungary, Poland, Slovakia, the four Central and East European countries, previously known as the Visegrád Group, adopted a 'semi-frugal' position in the 2021–27 European budget discussions. They had been less affected by COVID-19 than the southern European member states (Table 2.1). They did not want to jeopardise their cohesion status and access to EU funds, since their economies had been severely affected by their early and stringent lockdown. Their populations retained the ingrained discipline acquired from living for

a long period under Soviet rule. During the migration crisis in 2015, they had gained a reputation as nationalistic players, and as unconstructive and obstructive members of the EU, even though the political differences between them were growing and would be exacerbated by the COVID-19 crisis (Ehl, 2020). Hungary and Poland moved closer to becoming autocratic states and, like Italy, had turned to China to obtain supplies of ventilators and PPE when the EU failed to provide them (Macek, 2020).

Although the sixth wave countries, Bulgaria, Croatia and Romania, were ill-prepared to deal with the pandemic, they managed to contain the spread of the virus by introducing stringent anticipatory lockdown measures. Their approach presented significant constitutional challenges, particularly in Bulgaria and Romania, reflecting their low ratings for democratic indicators (Bačić Selanec, 2020; Selejan-Gutan, 2020: Vassileva, 2020).

Latvia, Lithuania and Estonia, which joined the EU at the same time as the Visegrád 4, formed a Baltic 'travel bubble' within the EU. They were relatively high in the table for democratic governance and administrative performance, and they introduced lockdown measures at an early stage. They were among the leaders in testing and suffered a relatively small number of deaths, without needing to overstep democratic controls (Dagilytė et al., 2020; Dimitrovs, 2020; Maruste, 2020).

The value of contextualising variables

This analysis of how combinations of variables contribute to outcomes shows that some countries belong to overlapping clusters while others are anomalous. Similarities and differences are found within each cluster, whether it be in terms of demographic, epidemiological or political characteristics, demonstrating the importance for comparative purposes of identifying the contexts within which variables are located and how they are conceptualised (Hantrais, 2009, pp. 74–6). When long-distance (all member states) and close-up (selected countries) perspectives are combined, the great diversity of the range of possible explanatory variables confirms the interest of adopting a 'variable distance' (Simmel, 1917).

A close-up or granular comparison of outcomes during the COVID-19 pandemic reveals differences that may not be apparent when aggregated national-level data are being compared from a long distance. It captures the great diversity of possible explanatory factors and the complexity of EU-wide comparisons that is hidden within any single set of statistics. The implications of changing the mix or number of countries and the level of analysis affects both the findings and their interpretation.

In its guidance for social distancing measures, issued on 23 March 2020, aimed at minimising the spread of COVID-19, the ECDC (2020a) considered the generic challenges that EU governments would face in implementing appropriate measures, due not least to their different social, political and constitutional contexts, meaning that:

> What may be acceptable and feasible in one setting may not be in another. Societal norms and values underpinning freedom of movement and travel [for example] will need to be weighed against precautionary principles and the public acceptance of risks. It is important to consider, anticipate and plan for mitigation, while keeping in mind the considerable public reaction that social distancing measures [among others] may cause. There is no one-size-fits-all approach for implementation of social distancing measures.
>
> (ECDC, 2020a, p. 5)

The same conclusion could be applied to the multiplicity of factors explored in the present study.

Postface

The primary aim in his book was to alert the producers and users of the vast quantities of statistics tracking the progression of the pandemic across Europe to the dangers of making superficial comparisons whenever they sought to identify which countries were performing best or worst (Gibney, 2020). Another important objective was to explore lessons that decision-makers might draw from their own countries' experiences of the pandemic and those of other EU member states in preparation for the subsequent outbreaks of the virus.

Knowledge about the disease, its treatments and how to prevent and control future surges is growing all the time. New knowledge changes preconceptions and assumptions, as well as the advice proffered by politicians and scientists. The unprecedented situation created by the pandemic prompted governments to introduce and enforce measures that would not have been publicly acceptable without the crisis. Their actions raised issues about how to safeguard the democratic principles that national governments agreed to observe as a condition of EU membership, by ensuring that greater central control over everyday life does not become the new normal. Another aspect of the new normal, which was set to outlive the crisis, was the accelerated and unprecedented development and adoption of technological solutions in response to the threats posed to economic and social life (Accenture, 2020).

Changes in patterns of work, education, entertainment, and modes of delivery of healthcare and other public and private services during the pandemic created new opportunities and the need for innovative coping strategies. But these changes also intensified pressures on families, businesses and public institutions while exacerbating deep-seated socio-economic divides.

Policy learning from contextualised European comparisons

The contextualised comparisons conducted in this book reveal the great variety of factors that need to be considered if policy interventions are to achieve their objective of eradicating the disease and supporting economic recovery. Arguably, lessons can be drawn from analysing the many possible

reasons why certain measures appear to have been effective at a specific point in time in some places compared to others. In addition, lessons may be learnt from examining how policy responses, many of which were politically motivated and conflicted with scientific evidence, might need to be moderated and adapted if they are to be applied in different policy settings both within and across countries.

Throughout the book, analysis across European societies was hampered not only by the lack of full datasets for all EU member states but also by the variable quality of the available data and differences in data collection methodologies. Despite the best efforts of national and international statistical agencies and the many caveats they have issued, problems with data validity, reliability, consistency and accuracy mean that comparative analysis within and between countries can be a hazardous endeavour. A preliminary lesson to be drawn from this book is that, if international comparisons are to be meaningful, better data are needed to support fine-grain contextualised analysis.

A second lesson is that the countries selected for comparison should be matched on some key characteristics that may assist analysts in understanding why a particular combination of factors contributed to the observed outcome. At the point when the European epidemic was just past its peak, from a lawyer's perspective, Grogan (2020b) identified 'high levels of transparency in the decision-making process' as a common factor among what she assessed as 'successful states in epidemiological terms'. Public trust in the actions taken by governments was attributed to 'a co-ordinated effort of diverse and relevant expertise'. The public were more likely to accept and rally behind governments where the rule-of-law was seen to underpin interventions in terms of clarity, certainty, accessibility and congruence, and where the measures applied were in harmony with notions of social responsibility. Our analysis of EU member states suggests that the factors selected by Grogan undoubtedly contributed to public support for, and compliance with, government interventions in democratic states in the EU during the early stages of the pandemic, resulting in public satisfaction with the management and control of the pandemic. These factors were not, however, found to be sufficient, or even necessary, reasons for positive outcomes measures by the numbers of cases and deaths, since governments wavered, and public attitudes fluctuated, as priorities shifted between safeguarding public health and managing economic recovery.

Decision-takers, whatever their political persuasion, had understood the importance of rapidly identifying hotspots within countries or regions and of implementing efficient and effective targeted testing and tracing regimes without infringing privacy rules. They recognised the need for circumscribed travel bans and lockdown measures, implemented in cooperation with local authorities if they were to limit the economic damage resulting from national lockdown. Most governments realised that they were more likely to be successful in containing the spread of the virus if they

imposed proportionate, legally justified measures, if they targeted the necessary resources at the affected areas, and if their interventions were supported by the public.

A further take-away for governments is that the Covid-19 crisis acted as a trigger forcing them to innovate in ways that would otherwise have been inconceivable. The pandemic gave them license to use emergency powers to introduce changes in the way people live, work, use their leisure and are cared for, without going through the lengthy processes of democratic debate, consultation and scrutiny. Technological innovations that would have taken years to develop were scaled up within a matter of weeks, often at the price of accepting state surveillance and the infringement of individual autonomy and privacy. European comparisons suggest that citizens in the more authoritarian states were acquiescent when faced with emergency legislation and harsh restrictions on personal freedom as the price to pay for averting irreparable damage to their economies. Questions remain for both EU member states and other countries seeking to learn from them. Should big government be allowed to become a permanent feature of the new normal? Will governments learn from the crisis and use the opportunity to undertake the radical system change needed to achieve more equal and climate-friendly societies?

Covid-19 and EU social union

The sharing of competences for public health between EU institutions and member states, and within them between different levels of governance, was a further factor complicating the analysis in this book. Chapters 3 and 4 demonstrated how the European Commission tested the limits of its competence in the public policy field, and how it responded to challenges to its authority from member states. In seeking to carry out its treaty commitment for coordinating action across the EU and promoting European solidarity, the Commission relaxed EU rules on state aid and suspended regulations on public procurement and deficits. The 2020 budget discussions exacerbated divisions between the frugal four and the friends of cohesion. The cohesion group emerged as net 'winners' in the financial compromise reached on 20 July 2020, leaving several countries less than satisfied with the outcome.

Rather than healing the divisions revealed during the 2008–09 financial crises, the 2015 refugee and migration crisis, and when the post-Brexit social agenda for Europe was launched in 2017 (European Economic and Social Committee, 2017), Covid-19 aggravated latent tensions, divisions and dilemmas not only between but also within EU member states. The pandemic raised the question of whether a common EU public health approach could have saved more lives, and it cast doubt on the capacity of the July budget settlement to deliver a speedy economic recovery across the EU. Despite the show of unity during the Brexit negotiations, and the

statement by the president of the European Commission (2020, 15 April) that 'the strength of Europe lies in its social and economic balance', the prospect of achieving ever closer social union seemed to be on hold, at least for so long as 'Union action shall respect the responsibilities of the Member States for the definition of their health policy and for the organisation and delivery of health services and medical care' (Article 168, 2007 Lisbon Treaty).