

The Zero Covid strategy protects people, economies and freedoms more effectively

August 2021

Cécile Philippe & Nicolas Marques





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This study is an updated version of a study published in April 2021, incorporating economic growth data for the first quarter of 2021 and mobility data for the first half of 2021. It is also enriched with content on civil liberties.

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« The generality of men are more capable of great efforts to obtain their ends than of continuous perseverance; their occupation and inconstancy deprives them of the fruits of the most promising beginnings »

Jean de La Bruyère, Characters/Les Caractères
ou Les mœurs de ce siècle, 1688

« I have opposed the principle of gradual abolition; I think it may do more harm than good to trade. Allow me to make a joke: the system of gradual abolition reminds me of the man who, in order to cut off his dog's tail without hurting him, cut off a little piece of it every day. »

John Prince Smith, Congress of economists convened by the Association belge pour la liberté commerciale, 1847.
This reasoning is still valid today. Seeking to contain Covid-19 within certain limits rather than eliminating it amounts to prolonging the problems instead of resolving them.

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1. SUMMARY

Zero Covid strategy better protects health, but not only

The G10 countries are far more affected by the pandemic in all aspects than the OECD countries that have opted for the Zero Covid strategy or similar, a representative benchmark of 82 million inhabitants of economically advanced democracies.

The number of deaths per million inhabitants was 44 times higher in the G10 countries, which means 1.1 million too many deaths by June 30, 2021. Economic performance, civil liberties and mobility were also worse.

Table 1 : G10 vs. Zero Covid countries

Health	Deaths per million people, Zero Covid countries	Deaths per million people, G10	Death multiplier, G10 vs Zero Covid	Excess mortality, G10 vs Zero Covid
2020	23	810	x 36	646 000
S1-2021	10	615	x 61	496 400
2020 & S1-2021	33	1 426	x 44	1 142 400
Economy	GDP evolution, Zero Covid countries	GDP evolution, G10	GDP gap, G10 vs Zero Covid	Per capita loss, G10 vs Zero Covid
2020 vs 2019	-1,6%	-5,0%	-3,4%	\$1 900
Q1-2021 vs Q4-2019	1,4%	-3,3%	-4,6%	\$650
Restrictions	Stringency Index Zero Covid countries	Stringency Index G10	Gap, G10 vs Zero Covid	
2020	50	52	2	
S1-2021	55	64	9	
2020 & S1-2021	52	56	4	
Mobility 2020 & S1-2021	Zero Covid countries	G10	Gap, G10 vs Zero Covid	
Workplace mobility indice	-10	-26	-16	
Leisure and retail mobility indice	-11	-22	-11	

Source : Institut économique Molinari with OECD, OurWorldInData, OxCGR and Google Covid-19 Community Mobility Trend.

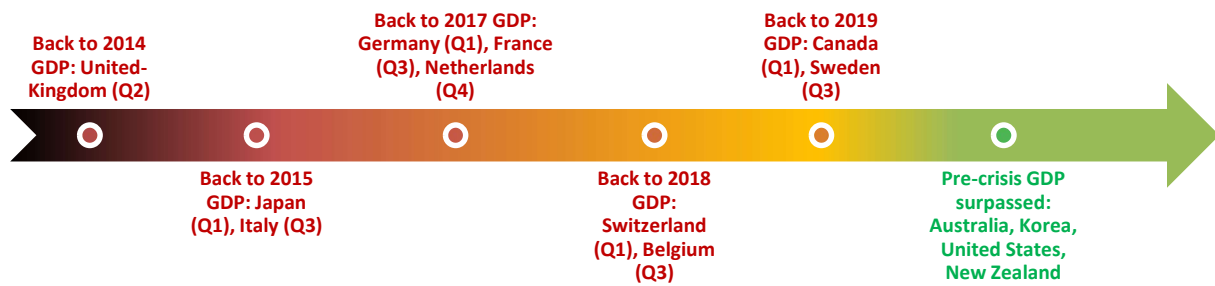
The zero covid strategy benefits the economy

In 2020, the countries applying Zero Covid strategy had almost returned to normal economic activity. Their GDP was down only slightly (-1.6%) compared to 2019. Meanwhile, the decline in GDP was greater (-5%) in G10 countries that had not eradicated the virus.

Zero Covid is a cost-effective economic investment with lasting positive effects. In the first quarter of 2021, the GDP of the Zero Covid countries grew compared to the fourth quarter of 2019 (+1.4%). In the countries that did not eradicate the virus, GDP decline remained significant compared to the fourth quarter of 2019 (-3.3%).

By 2021, none of the G10 countries had recovered their pre-crisis quarterly GDP levels, with the exception of the United States, while Australia, New Zealand and South Korea had done so.

Figure 1 : How many years of backward GDP



Reading: in 2021 the last known quarterly GDP of the United Kingdom was equivalent to that of the 2nd quarter of 2014, the pandemic having set it back 7 years. Calculations by Institut économique Molinari based on OECD (quarterly accounts, VPVOBARSA series in US dollars, volume, purchasing power parity, seasonally adjusted, extracted on 31/07/2021) for Q2.2021 or Q1.2021 if Q2 was not available (Australia, Great Britain, Japan, New Zealand, Netherlands, Switzerland)

The Zero Covid strategy preserves freedoms more effectively

The Zero Covid strategy costs less in terms of civil liberties. An analysis of the data that make up the *Stringency Index* indicates a clear advantage for the Zero Covid countries over the other G10 countries in terms of freedom.

The OECD countries applying Zero Covid or similar strategies – Australia, South Korea and New Zealand – have had a restriction level four points lower than the G10 countries over the last year-and-a-half (52 versus 56 in the *Stringency Index*).

Conversely, the stop-and-go alternance in the G10 countries, a consequence of the virus mitigation strategy, leads to a periodic retrenchment of freedoms, reflecting measures to contain the pandemic. As long as the virus continues to spread, freedoms are going to be restricted. This entails a proliferation of moral problems, with isolation and a deterioration in the care of the elderly and of unprotected children exposed to the spread of the virus in schools, as well as tensions with people unwilling or unable to be vaccinated.

The Zero Covid strategy preserves everyday mobility more effectively

Mobility data from Google show that “workplace” traffic in the second quarter of 2020 fell by less in the countries applying the Zero Covid strategy (-14 % compared to -36 %). These data also show that Zero Covid countries retained a significant advantage with a 5% reduction in mobility in the second quarter of 2021 compared to 22% in countries not applying a Zero Covid strategy.

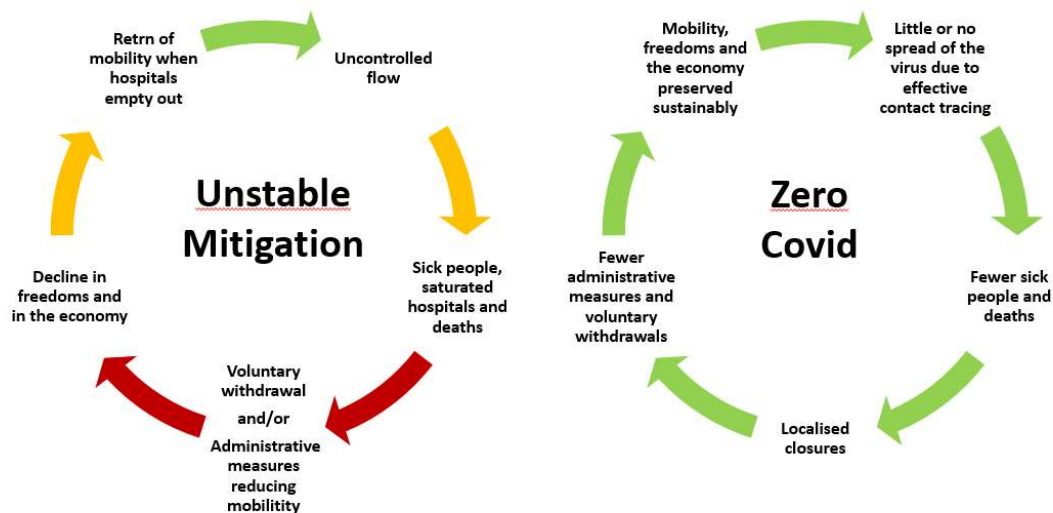
Google data show that traffic in “cafés, restaurants, hotels, non-food businesses and leisure and cultural activities in general” was down by 17% in the second quarter of 2020. This was a much smaller decline than in the countries applying a mitigation strategy (down 36%). One year later, the Zero Covid countries retain a significant advantage, with normal mobility in the second quarter of 2021 (+1%) compared to a 15% decline in the G10 countries not applying this strategy.

Zero covid helps control uncertainty

Cross-referencing of quarterly economic and health data confirms the superiority of the elimination strategy in terms of anticipation. People in those countries benefit from a level of visibility enabling them to project their societies and economies into the future.

In contrast, the course taken by the G10 countries has produced fluctuations, with the epidemic rebounding in the fourth quarter of 2020 everywhere except Japan, which is moving closer to Zero Covid. The mitigation strategy is causing them to seesaw, making it difficult to project into the future and thereby penalising societies and economies. This is especially problematic for businesses that depend on significant social interaction, which have been closed for months, as representatives of the hotel, restaurant, culture and recreation sectors have stated repeatedly.

Figure 2 : Positive dynamics Zero Covid and unstable G10 practicing mitigation



Participation in economic and social life is a function of people's confidence in being able to take part without running the risk of falling ill, contaminating others or seeing health services overwhelmed.

It is not only government-imposed restrictions that reduce movement. Voluntary decisions by individuals to cut back on social life in the face of a fast-spreading virus also play a key role. The Swedish example shows the importance of this phenomenon since, even without a lockdown, the decline in mobility was significant. This explains why Sweden's economic contraction was close to the levels observed in Scandinavian countries that went into formal lockdown. Where the elimination strategy is implemented, the end of the tunnel becomes predictable, and it is then possible to make reliable long-term plans, resulting in stronger economic performance and lower mortality.

The contrast between islands confirms the superiority of Zero covid

The contrast is especially stark between Commonwealth islands applying the Zero Covid strategy (Australia, New Zealand) or the mitigation strategy (United Kingdom).

The economic decline of the United Kingdom was four times greater in 2020 and nine times greater than that of Australia and New Zealand when the first quarter of 2021 is compared with the fourth quarter of 2019.

Restrictive measures were on average 20% more severe in the United Kingdom than in the islands of Oceania, according to the *Stringency Index* from Our World in Data.

Finally, the decline in mobility was three times greater in the U.K., according to Google data, while deaths in the U.K. were 61 times higher.

France is much harder hit than the Zero covid countries on all counts

France is more affected by the epidemic than the OECD countries that have chosen the Zero Covid or similar strategies, constituting a representative sample of 82 million people in developed countries.

Deaths per million people are 45 times higher in France, indicating 107,000 preventable deaths as of July 30, 2021.

In 2020, the decline in GDP was five times as great, with a difference of 6.3 points of GDP and a shortfall in wealth creation equivalent to €2,200 per capita. In the first quarter 2021, the growth gap amounted to 5.5 points of GDP vs Zero Covid countries, or €400 per capita.

The decline in freedoms was more pronounced. The *Stringency Index* has averaged 57 in France since the start of the pandemic compared to 52 in Australia, South Korea and New Zealand.

The decline in mobility was 3 times more pronounced. Google's mobility data shows that the decline in mobility associated with work and leisure/retail locations was 29 and 33% in France, compared to 10 and 11% in Australia, South Korea and New Zealand.

Table 2 : Comparison France vs Zero Covid countries

Health	Deaths per million people, Zero Covid countries	Deaths per million people, France	Death multiplier, France vs Zero Covid	Excess mortality, France vs Zero Covid
2020	23	992	x 44	63 300
S1-2021	14	654	x 48	43 700
2020 & S1-2021	36	1 646	x 45	107 000
Economy	GDP evolution, Zero Covid countries	GDP evolution, France	GDP gap, France vs Zero Covid	Per capita loss, France vs Zero Covid
2020 vs 2019	-1,6%	-7,9%	-6,3%	2 100 €
Q1-2021 vs Q4-2019	1,4%	-4,2%	-5,5%	400 €
Restrictions	Stringency Index Zero Covid countries	Stringency Index France	Gap, France vs Zero Covid	
2020	50	54	4	
S1-2021	55	63	8	
2020 & S1-2021	52	57	5	
Mobility 2020 & S1-2021	Zero Covid countries	France	Gap, G10 vs Zero Covid	
Workplace mobility indice	-10	-29	-19	
Leisure and retail mobility indice	-11	-33	-22	

Source : Institut économique Molinari with OECD, OurWorldInData, OxCGR and Google Covid-19 Community Mobility Trend.

Recommendations

1. Stop presenting vaccination as a substitute for all other measures to control Covid-19. Feedback from other countries shows at this stage that vaccines alone do not eliminate the epidemic. Rather, their experience suggests combining vaccination campaigns with a Zero Covid approach.
2. Urgently protect schools for the start of the 2021 school year with: the systematic installation of CO₂ sensors in classrooms; outfitting of lunchrooms (air purifiers, possibility of boxed lunches, etc.) to limit contamination associated with food service; systematic saliva testing for pupils twice a week; true school online continuity for children with Covid or contact cases who are required to stay at home.
3. Open a dialogue connecting the central government and local representatives with experts in countries that are applying the Zero Covid strategy.
4. Support the establishment of pilot projects in areas where local executives are receptive to the advantages of a Zero Covid strategy.
5. Organise missions to evaluate Sars-Cov2 control strategies in parliamentary assemblies and Organise information missions on long Covid among children and adults.
6. Introduce the Zero Covid strategy in the analysis of risks related to the health crisis at the French and European levels. The European Union could be a major player in strategy coordination in the same way as its investment in the purchase of vaccines.¹

2. INTRODUCTION

More than 15 months ago, Europe went into lockdown in efforts to halt the advance of Covid-19. Since then, European countries and France have been pursuing a so-called mitigation strategy in search of an acceptable compromise between health and economic objectives.

The last few months provide empirical data useful in assessing the effectiveness of our public policies for fighting the pandemic. Despite widespread efforts, the disease has been especially deadly in Europe, North and South America. The impact has not been as great in Asia, Africa and Oceania. Though the data may not be strictly homogeneous, the magnitude of the variation raises questions.²

Table 3 : Mortality associated with Covid-19, by major region

Region	Population	Cases diagnosed	Deaths	Deaths per million people
North America	592 million	40 million	902 215	1 524
South America	431 million	33 million	1 004 715	2 332
Europe	749 million	48 million	1 105 367	1 476
Asia	4 640 million	56 million	790 589	170
Africa	1 341 million	6 million	142 948	107
Oceania	43 million	54 936	1 131	27
World	7,8 billion	182 million	3 946 980	506

Source : Institut économique Molinari based on OurWorldInData, as of 2021-06-30

In rich countries, the discrepancies are due partly to different strategic choices. While most countries have chosen a mitigation strategy, others have taken an elimination approach. This has produced a full-scale set of experiments in recent months. At this stage, experience shows the elimination strategy (Zero Covid) to be more effective in both health and economic terms.

Contrary to some assertions, the data show, quarter after quarter, that aligning health and economic concerns is possible with Covid-19, despite the challenges this presents. Seeking to eliminate the virus turns out not to be as difficult or costly as seeking to contain it, which leads to a waiting game and to an economically costly stop-and-go process.

Despite positive results from the countries pursuing the elimination strategy – constituting a true testing ground – most G10 countries are not, at this stage, considering a major change in public policy, relying entirely on vaccines.

There is considerable resistance, especially from those concerned with civil liberties. A significant number of people take a jaundiced view of unprecedented government control. They see this level of control increasing with Covid and fear that there is no going back. This fear is especially pronounced in France, which has been using regulatory and fiscal weapons in a heavy-handed way for decades. The Zero Covid strategy is being presented as more rigorous than the mitigation approach, and public opinion is reluctant to accept it. In fact, the contrary is true. The stop-and-go alternance resulting from the mitigation strategy applied to the virus is precisely what creates the conditions for prolonged restrictions or even a confiscation of our freedoms. When the virus keeps spreading, it becomes impossible to retrieve these freedoms.

This is shown in the analysis of data extracted by the Oxford COVID-19 Government Response Tracker (OxCGRT).³ Not only does alignment between health and economic concerns seem possible in the case of this new virus, but to this is added a crucial element for our democratic countries, namely being able to regain our freedoms.

This calls for a change in public policy, as recommended by numerous doctors, political scientists, economists and scientists worldwide⁴ and by economists Philippe Aghion and Patrick Artus.⁵

While the benefit of the Zero Covid strategy for health is direct, the economic benefit arises as an initial investment and return due to the dynamics of growth and suppression. Stopping the outbreak over a short time at a high economic cost, leads to a shift to a near normal condition with only localized episodic outbreaks, similar to fire fighting. The resulting resumption of economic activity accumulates its benefit over time. The recovery is limited only by the failure of other countries to achieve this goal and this should motivate better global collaboration for achieving a shared end. There is also room for optimizing all stages of the process to reduce the necessary investment and accelerate the restoration of normalization, including but not limited to better use of vaccination. In some circles there has been a notion of a return to prepandemic economic activity without elimination through herd immunity. This passive concept has proven a false goal, ever beyond reach and yet attracting adherents despite its manifest failure in economic as well as health terms.

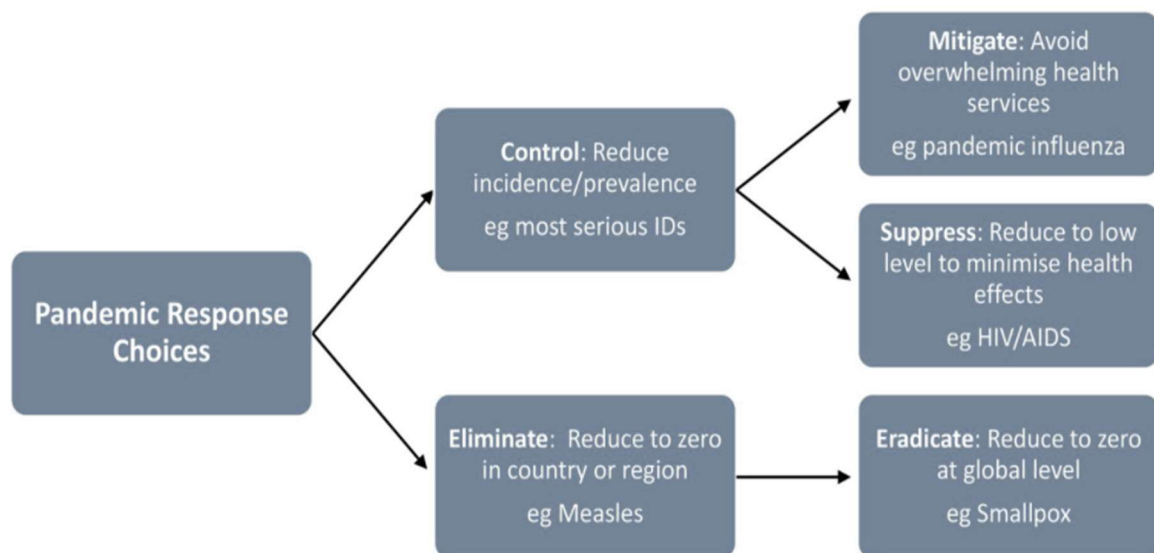
3. TWO STRATEGIES FOR DEALING WITH EPIDEMICS

There are two main strategies for dealing with infectious diseases. The first one, mitigation, aims to limit the spread of the virus, with the main goal sometimes expressed as being to avoid saturating the health care system. Control measures are strengthened as the virus becomes more prevalent, then reduced as it is less common. This is the strategy being pursued in France.

The second strategy is elimination, applied historically to smallpox and measles. This is the approach chosen by much of Asia, Oceania and Atlantic Canada to fight Covid-19.

Then there are those who seem to think there is a third way. This would consist of doing nothing and letting the virus spread. Some of them express surprise by the fuss being made over a virus that has killed 4 million people, a figure that may look low compared to a total human population of 7.8 billion though it is surely high as a catastrophe and preventable deaths. Moreover, they are forgetting that the number of deaths has been limited hugely by the preventive reactions of individuals who voluntarily reduce their movements and by the fairly drastic control measures imposed by public authorities. New variants, including the Delta variant, further undermine this concept. Based on Chinese data, it has been calculated that the original virus was spreading from one day to the next by a factor of 1.1 to 1.22, meaning that, after three months, if things continued as before, it could have contaminated the entire planet for lack of a collective reaction.⁶

Figure 3 : Strategic choices for pandemic response



Based on: Dowdle, MMWR Supple. December 1999 / 48 (SU01);23 7.⁷

4. TOOLS USED DIFFERENTLY

Mitigation and elimination strategies have different goals. They impose similar control measures and reductions in social interaction but in very different time frames.

Mitigation aims to prevent the saturation of hospitals by attempting to maintain the virus's spread at a level that hospitals can handle. Elimination aims to eradicate the virus completely to allow for a return to prepandemic life.

France experimented with a strict lockdown early in the epidemic due to hospital saturation in March 2020. Since then, longer-term measures to reduce contacts (wearing of masks, closing of bars, cafés, restaurants, performance venues and so on) and short local lockdowns in heavily contaminated areas were imposed in the hope of keeping the number of people hospitalized within acceptable limits.

New Zealand, on the other hand, imposed a strict lockdown at the start of the epidemic to eliminate the virus from its territory. It then reopened society as a whole while maintaining strict mobility controls at entry points along with active surveillance, which led occasionally to local lockdowns in areas where the virus was detected.

Both strategies use interaction reduction methods, but their aims differ. The distinction lies not so much in whether or not to go into lockdown but rather in deciding why, when and in what way a lockdown begins and ends.⁸ The French strategy, sometimes viewed as hospital-centric, aims to avoid the saturation of resources. The Zero Covid strategy aims to maximize the benefits from the effort exerted in the fight against the virus and to enable individuals to return to normal life.

Vaccines are essential tools in both strategies but do not hold the same place. In the mitigation strategy, they are the key tool in the hope for a return to normal. In the elimination strategy, they are one tool among others for maintaining the normal life that they were able to restore months ago. The calculation regarding immunity is not the same. If immunity is not achieved through vaccines under the strategies pursued in various G10 countries – due to the emergence of variants that are able to evade natural or vaccine immunity – lockdowns and other restrictive measures will continue to be applied without any real prospect of resuming normal life. The result will be a continuation of a stop-and-go alternance and indefinite limitations on freedoms.

After more than 15 months fighting Covid-19, the data show the value of the elimination strategy in terms of preserving economies, freedoms and mobility, and feedback from abroad calls for vaccination campaigns to be coupled with a Zero Covid approach.

5. THOSE WHO DID BEST BENEFITED THE MOST IN BOTH HEALTH AND ECONOMIC TERMS

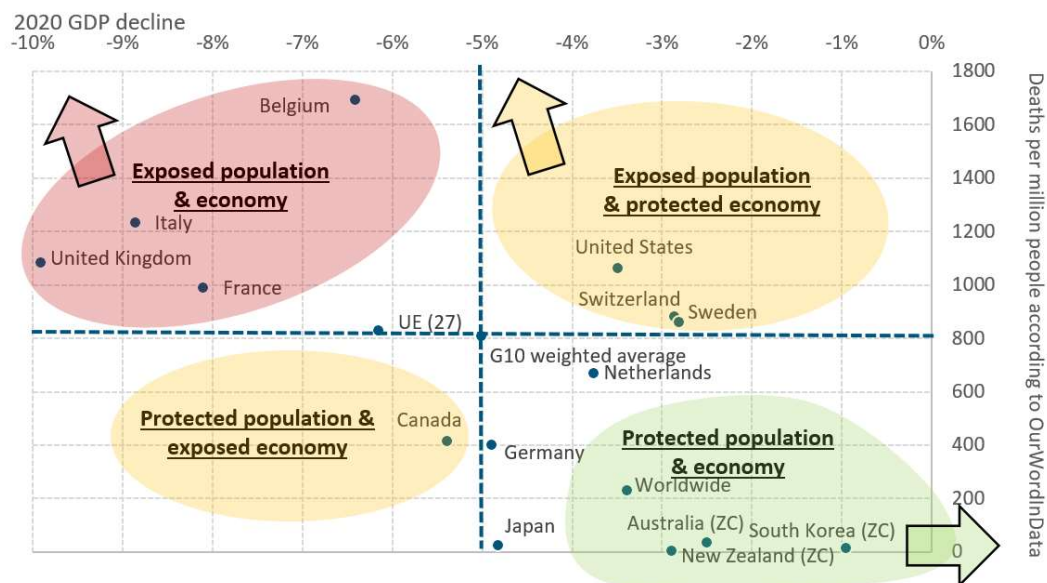
An analysis of the relative performances of the 11 G10 countries shows that the economy-health trade-off is not prevalent.

The top-performing countries fare better in both health and economic terms

In 2020, three countries (the United States, Switzerland and Sweden), accounting for 43% of the population of the G10 countries, had protected their economies more than their people. Canada, a country accounting for 4% of the G10 population, had mostly done the opposite, namely protecting its people at the expense of its economy.

Most G10 countries, and most of the G10 population, fell outside this paradigm. Four countries accounting for 25% of the G10 population protected neither their people nor their economies. These four are Belgium, France, Italy and the United Kingdom, with the worst performances among the G10 in both human and economic terms. In contrast, three other countries, accounting for 28% of the G10 population, did a better job of protecting their people and their economies (Germany, the Netherlands and Japan).⁹

Figure 4: Covid: The countries that performed best protected both their people and their economies in 2020

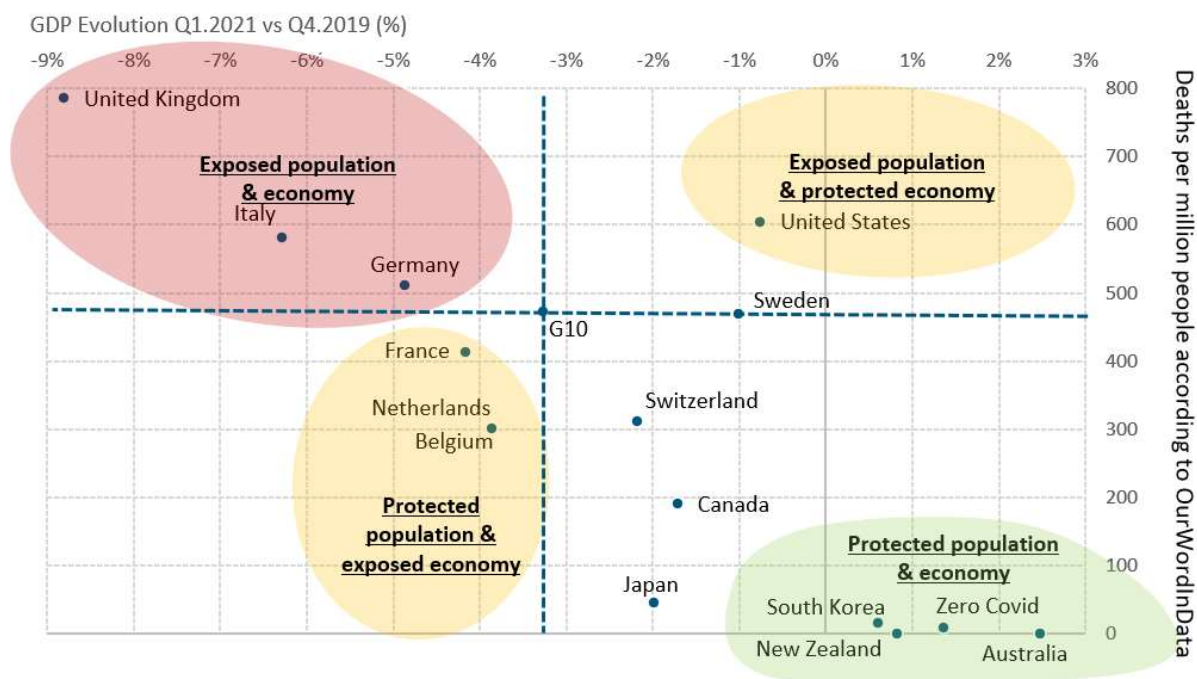


Reading: France, with 992 deaths per million people and a 8.1% decline in GDP in 2020, is among the countries that protected neither its people nor its economy. Sources: Institut économique Molinari, based on OECD real annual 2019-2020 GDP growth rate (March 2021), stats.govt.nz and OurWorldData (Cumulative confirmed COVID-19 deaths per million people) for the 11 G10 countries plus Australia, South Korea and New Zealand, which have applied the Zero Covid (ZC) strategy.

When we broadened the analysis to include the OECD countries applying the Zero Covid strategy, we saw that the rift between defending the economy and protecting the population was simply not relevant. Australia, South Korea and New Zealand all had lower mortality and smaller declines in GDP. They had all done much better than the G10 average. This full-scale test, conducted on 82 million people, was very conclusive.

In the first quarter of 2021, a gap remained between countries applying a mitigation strategy and those aiming for Zero Covid. Their social and economic situation is improving steadily while that of the G10 countries has still not returned to normal, with GDPs down from Q4 2019 and significant mortality everywhere except Japan (Figure 5).

Figure 5 : Covid: The countries that performed best protected both their people and their economies in the first quarter of 2021



Sources: Institut économique Molinari, based on OECD (quarterly accounts, VPVOBARSA series in US dollars, volume, purchasing power parity, seasonally adjusted, extracted on 07/31/2021) and OurWorldData (Cumulative confirmed COVID-19 deaths per million people) for the 11 G10 countries plus Australia, South Korea and New Zealand, which have applied the Zero Covid strategy.

Zero Covid: an economic investment that pays off in the long run

When the data are analysed over periods of less than a year, the economic merits of the Zero Covid strategy are even more significant¹⁰. The countries that got organised to eradicate the virus by means of a Zero Covid approach, or something close to it (South Korea), came out better on both scores. On the one hand, they experienced a smaller economic decline in the second quarter of 2020 compared to the countries that allowed the virus to spread to such an extent that their health systems were saturated (-5.7% versus -12%). Comparisons by country in the second quarter of 2020 should be taken with a grain of salt since some European countries have strayed from statistical rules that normally lead government output to be appraised at factor prices.¹¹ Even so, data show that the countries treating suppression of the virus's spread as an "investment" are doing better and are able to return to near-normal activity.¹² This observation is in line with analyses by the World Bank¹³ and the IMF¹⁴ noting the effectiveness and the more cost-efficient nature of early responses to the pandemic for households and businesses.

The countries that were fastest off the mark in reducing mobility in order to avoid contamination are the same countries that endured shorter restrictions and protected their growth more effectively. In

contrast, the countries that were slow to react are paying high human, economic and financial costs. The Zero Covid strategy is also showing lasting positive effects. Restrictions, whether imposed by the authorities or self-imposed by people seeking to limit the risk of contamination, were less severe in the Zero Covid countries in every quarter.

In the fourth quarter of 2020, Zero Covid countries GDP was down slightly (-0.5%) compared to 2019 due to restrictions on dealings with countries still in the grip of the virus and subject to local lockdowns linked to specific outbreaks. Meanwhile, the decline in GDP was greater (-3%) in countries that had not eradicated the virus, with restrictions on movement arising from individual choices as well as from health policies.

In the first quarter of 2021, the GDPs of the Zero Covid countries were growing compared to the fourth quarter of 2020 (+0.8%). In contrast, GDP decline was still significant in the countries that had not eradicated the virus compared to the fourth quarter of 2019 (-2.6%).

In Q2 2021, Germany, France and Italy had a GDP decline of 3 to 4 points compared to Q4 2019. These countries have still not recovered their pre-crisis level of activity, with GDP stagnating over the last 4 quarters.

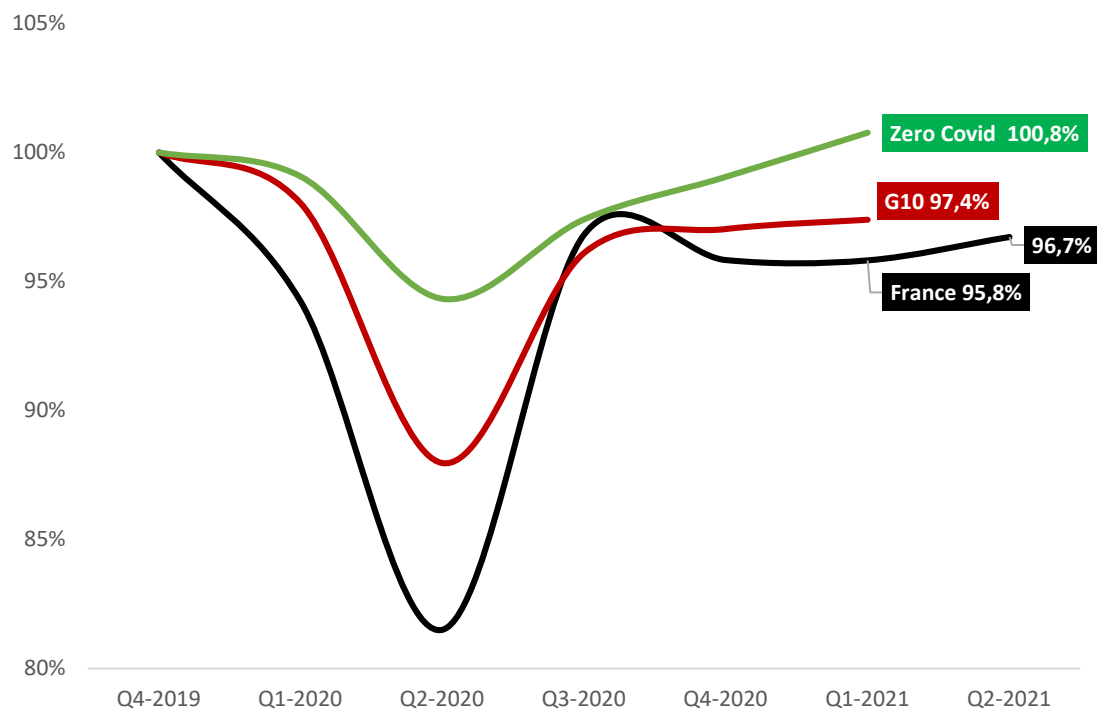
A similar observation was made during the Spanish flu epidemic in the United States a century ago. The cities that had made the greatest economic effort by going into lockdown for the longest time were also those that experienced the sharpest economic rebound. This is shown by a study¹⁵ published by a group of economists at MIT and the Federal Reserve. New York and St. Louis, where social distancing and lockdown measures came earlier and for longer periods, had lower mortality rates and economic rebounds that came sooner and more sustainably, especially in terms of jobs.

Table 4 : Change in quarterly GDP compared to the fourth quarter of 2019 (%)

Country vs	2020-Q1 Q4-2019	2020-Q2 Q4-2019	2020-Q3 Q4-2019	2020-Q4 Q4-2019	2021-Q1 Q4-2019	2021-Q2 Q4-2019	Strategy
Germany	-1.8%	-11.6%	-3.6%	-2.9%	-4.9%	-3.4%	Other
Australia	-0.3%	-7.2%	-4.0%	-1.0%	0.8%	not available	ZC
Belgium	-3.3%	-14.9%	-4.9%	-4.9%	-3.9%	-2.5%	Other
Canada	-2.0%	-13.1%	-5.2%	-3.1%	-1.7%	-1.1%	Other
South Korea	-1.3%	-4.4%	-2.2%	-1.1%	0.6%	1.3%	ZC
United States	-1.3%	-10.1%	-3.3%	-2.3%	-0.8%	0.8%	Other
France	-5.8%	-18.5%	-3.2%	-4.2%	-4.2%	-3.3%	Other
Italy	-5.7%	-18.0%	-4.9%	-6.5%	-6.3%	-3.8%	Other
Japan	-0.5%	-8.5%	-3.7%	-1.0%	-2.0%	not available	Other
New Zealand	-1.1%	-10.1%	2.6%	1.1%	2.5%	not available	ZC
Netherlands	-1.6%	-9.9%	-3.1%	-3.1%	-3.9%	not available	Other
United Kingdom	-2.8%	-21.8%	-8.5%	-7.3%	-8.8%	not available	Other
Sweden	-0.9%	-8.6%	-1.8%	-1.8%	-1.0%	-0.1%	Other
Switzerland	-1.7%	-8.4%	-1.8%	-1.7%	-2.2%	not available	Other
Zero Covid	-0.9%	-5.7%	-2.6%	-0.9%	0.8%		ZC
Other strategies	-2.0%	-12.0%	-3.9%	-3.0%	-2.6%		Other
Zero Covid advantage vs. other	1.1%	6.4%	1.3%	2.0%	3.4%		

Source: OECD (quarterly accounts, VPVOBARSA series in US dollars, volume, purchasing power parity, seasonally adjusted, extracted on 07/31/2021) for the G10 countries plus Australia, South Korea and New Zealand. Weighted averages. Reading: In the second quarter of 2020, GDP fell by 5.7% in the Zero Covid countries, 6.4 points less than in the countries applying another strategy, down 12%.

Figure 6 : Quarterly GDP comparison with to the fourth quarter of 2019 (base 100%)



Source: Institut économique Molinari based on OECD (quarterly accounts, VPVOBARSA series in US dollars, volume purchasing power parity, seasonally adjusted, extracted on 31/07/2021).

6. ZERO COVID: MORE FREEDOMS

More than 600 people are collecting data that can track changes in policy toward the health crisis in 186 countries on a continuous basis as part of the OxCGRT project.¹⁶ Since March 2020, the team of researchers at the Blavatnik School of Government of the University of Oxford has been sustaining 23 indicators for measuring policies on lockdowns and closures (eight indicators), on the economy (four indicators), on health (eight indicators) and on vaccination (three indicators).¹⁷

These measurements are then combined in the form of indices that aim, on a scale from zero to 100, to measure the intensity of a policy and thereby compare the various countries being observed.

One of these indices, the *Stringency Index*, measures countries' lockdown and closure policies more specifically. This is the index that comes closest to being an indicator of civil liberties since the factors it measures all deal with individuals' freedom of movement, whether being able to go to school or to work, to use public transport or to go abroad. It consists of the eight indicators measuring restriction levels. These cover school closures (C1), workplace closures (C2), cancellation of public events (C3), restrictions on the number of participants at gatherings (C4), policies on opening public transport (C5), instructions and policies on staying at home (C6), restrictions on internal travel (C7) and restrictions on international travel (C8). To this is added health indicator H1 measuring policies on public information campaigns. This criterion has very little impact on the overall indicator value.

Analysis of the data that go into the *Stringency Index* shows a clear advantage for the Zero Covid countries in terms of freedom over the other countries comprising the G10. Altogether, the OECD countries applying Zero Covid or similar strategies – Australia, South Korea and New Zealand – have had four fewer restriction points than the G10 countries in the last year-and-a-half.

When we analyse the dynamics quarter by quarter, we see that the Zero Covid countries have always been freer, apart from the first quarter of 2020, corresponding to more rapid awareness of the scope of the epidemic, and in the third quarter of 2020, to a brief easing of restrictions in the G10 countries (Table 5 page 20).

The Zero Covid countries did not experience restrictions as intense as the G10 countries in the second quarter of 2020 and again in late 2020 and early 2021 following new epidemiological waves. We can see, as in the economic sphere, that they did not have to go through a stop-and-go approach to freedoms, characteristic of the countries that let contaminations spread again without seeking to halt them and then reacted with massive restrictions on freedoms to prevent the pandemic from overwhelming hospital capacity.

This full-scale test, conducted on 82 million inhabitants, is categorical regarding the preservation of freedoms. It shows that the approach aimed at eliminating the virus's spread respects freedoms more than the mitigation approach.

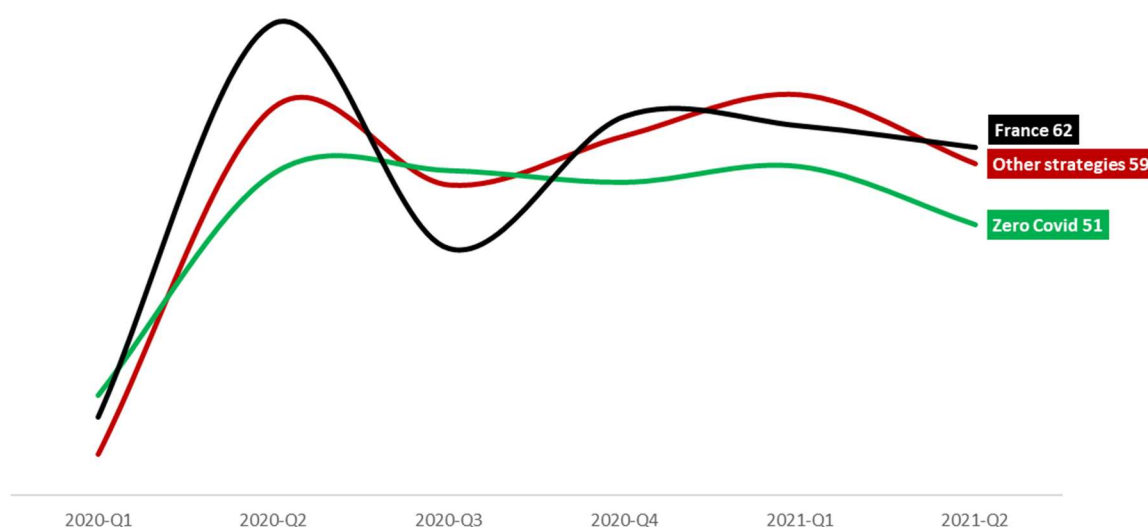
Table 5 : Freedoms better preserved in the Zero Covid countries (Stringency Index)

Country	2020-Q1	2020-Q2	2020-Q3	2020-Q4	2021-Q1	2021-Q2	6 trimestres	Strategy
Germany	20	67	55	64	81	73	60	Other
Australia	20	65	73	62	58	53	55	ZC
Belgium	21	72	54	58	62	57	54	Other
Canada	15	72	66	67	74	75	61	Other
South Korea	33	55	53	57	62	53	52	ZC
United States	17	72	67	69	68	54	58	Other
France	25	78	48	66	64	62	57	Other
Italy	40	73	54	72	82	75	66	Other
Japan	22	39	31	39	48	49	38	Other
New Zealand	23	60	40	23	28	22	33	ZC
Netherlands	16	71	45	64	78	68	57	Other
United Kingdom	17	75	66	70	85	60	62	Other
Sweden	14	64	57	61	69	62	55	Other
Switzerland	18	60	42	50	60	52	47	Other
Zero Covid	28	58	58	57	59	51	52	Other
Other strategies	20	67	56	63	69	59	56	ZC
Zero Covid advantage vs. Other	+7,9	-8,9	+1,8	-6,3	-9,7	-8,2	-3,9	

Reading: the higher the numbers, the more significant the restrictions.

Source: Institut économique Molinari with Oxford Covid-19 Government Response Tracker, *Stringency Index*

Figure 7: Freedoms better preserved in the Zero Covid countries (Stringency Index)



Reading: the higher the numbers, the more significant the restrictions.

Source: Institut économique Molinari with Oxford Covid-19 Government Response Tracker

Zero Covid protects the freedom to go to school or work, to take public transport and to leave home while reducing masking requirements

Contrary to narratives that sometimes portray Zero Covid as an austere approach, *Stringency Index* data show that this strategy protects the freedom to go to school or to work, to take public transport and to leave home while reducing obligations to wear a mask. The data collected by the Blavatnik School of Government show it to have been less costly over all in terms of civil liberties than the

mitigation strategy in the past 18 months (Figure 8 page 21) and especially advantageous in 2021 (Table 6 page 21).

Figure 8: Since the start of the pandemic, freedoms are better preserved in the Zero Covid countries (Stringency Index)



Table 6: Freedoms are better preserved in the Zero Covid countries (Stringency Index and masks)

	2020-Q1	2020-Q2	2020-Q3	2020-Q4	2021-Q1	2021-Q2	6 trimestres
StringencyIndex	7.9	-8.9	1.8	-6.3	-9.7	-8.2	-3.9
C1_School closing	0.43	-0.43	-0.07	-0.76	-0.32	-0.70	-0.31
C2_Workplace closing	-0.07	-0.36	0.43	-0.65	-0.73	-0.61	-0.33
C3_Cancel public events	0.28	-0.23	0.20	-0.26	-0.13	-0.23	-0.06
C4_Restrictions on gatherings	0.14	-0.52	0.78	0.11	0.15	-0.01	0.11
C5_Close public transport	-0.10	-0.43	-0.19	-0.33	-0.55	-0.43	-0.34
C6_Stay at home requirements	0.04	-0.54	0.51	-0.31	-0.89	-0.41	-0.26
C7_Restrictions on internal movement	0.08	-0.56	-0.09	0.38	-0.38	0.05	-0.09
C8_International travel controls	0.57	0.49	0.23	-0.14	0.16	-0.17	0.19
Apart from the StringencyIndex							
H6_Facial Coverings	-0.1	-1.1	-0.7	-0.2	-0.3	0.0	-0.4

Reading: the higher the numbers, the more significant the restrictions. Source: Institut économique Molinari based on the Oxford Covid-19 Government Response Tracker. The higher the figures, the greater the restrictions

The countries that have succeeded in eliminating the virus have been able to open schools safely and sustainably. Overall, since the start of the pandemic, they have had to face fewer restrictions than the other countries (Table 7). On average, the G10 countries have had more restrictions (1.7) than the Zero Covid countries (1.5), creating a difference of nearly 0.3.

France (1.5 since the start of the pandemic) is not positioned as well as New Zealand and Australia (0.5 and 1.4 respectively) but better than South Korea (1.9). In the context of the health crisis, France

rediscovered a political marker, the school. This became a symbol both of French particularism and of French voluntarism, giving a special place to education. In a speech in late March, President Emmanuel Macron stated: “We can congratulate ourselves in our country on having been the first to open our schools and to have kept them open since September 2020. [...] Our children need to learn and to be together. Nobody can say what effects too long a closure would have. Yes, the virus spreads in schools, but no more than elsewhere, and our children’s education is not negotiable.”¹⁸ France thus kept its schools open, with Covid testing far below best practices (Germany, Austria, United Kingdom), at the price of significant viral spread in schools (Zoom 1 page 22).

Table 7: Quarterly school closure indicator

Country	2020-Q1	2020-Q2	2020-Q3	2020-Q4	2021-Q1	2021-Q2	6 trimestres	Strategy
Germany	0.9	2.5	1.4	1.4	3.0	2.3	1.9	Other
Australia	0.3	2.0	2.7	1.2	1.3	1.1	1.4	ZC
Belgium	0.4	2.0	1.0	1.2	1.1	1.4	1.2	Other
Canada	0.5	3.0	2.8	2.6	3.0	3.0	2.5	Other
South Korea	1.9	2.5	1.9	1.6	2.3	1.0	1.9	ZC
United States	0.9	3.0	3.0	3.0	2.4	1.8	2.4	Other
France	1.0	2.3	1.2	1.7	1.4	1.3	1.5	Other
Italy	1.3	3.0	2.9	1.8	2.5	1.5	2.1	Other
Japan	1.0	2.3	1.0	1.0	1.0	1.2	1.2	Other
New Zealand	0.3	1.5	0.8	0.1	0.2	0.0	0.5	ZC
Netherlands	0.6	2.3	1.0	1.3	2.4	1.3	1.5	Other
United Kingdom	0.5	3.0	2.1	1.8	2.7	1.1	1.9	Other
Sweden	0.3	2.0	1.5	1.3	2.0	0.6	1.3	Other
Switzerland	0.5	1.3	0.0	1.3	2.0	1.2	1.1	Other
Zero Covid	1.3	2.3	2.1	1.4	1.9	1.0	1.7	Other
Other strategies	0.9	2.7	2.2	2.1	2.2	1.7	2.0	ZC
Zero Covid advantage vs. Other	+0,4	-0,4	-0,1	-0,8	-0,3	-0,7	-0,3	

Reading: the higher the numbers, the more significant the restrictions. Source: Institut économique Molinari based on Oxford Covid-19 Government Response Tracker, criterion C1_School closing.

Zoom 1: One hundred times less testing in French national education compared to top international standards

According to bulletins available on the website of the ministry of national education, a weekly average of 230,000 saliva tests were conducted on students and staff between March 15 and June 28,¹⁹ amounting to 1.8% of students and staff.²⁰

The government target of a million tests a month in January was not met.²¹

The target of 300,000 tests a week was met only once, with 346,000 saliva tests conducted in the week of May 17 to 25, amounting to 2.5% of students and staff. This was a commitment made by the prime minister in mid-January 2021 and reiterated by the minister of education, who had indicated that it would be implemented by mid-March.²²

These tests amount to just a small fraction of what was done in the United Kingdom or Austria to protect schools. In an opinion issued on April 19, the *Conseil scientifique* stated that students there were tested once or twice a week.²³ In the United Kingdom, each student conducted three self-tests in his or her school and received two tests to be done at home each week in the second quarter of 2021. The frequency was 100 times greater than in France. In Austria, primary school students were tested at school twice a week, and 10-to-18-year-olds with special schedules were tested once a week. About 1.4 million tests were conducted each week. This was six times more tests than in France, with eight times the population.

Studies by Vittoria Colizza (INSERM) and Alain Barrat (CNRS) show that twice-weekly testing would produce a 75% reduction in the number of cases in schools as part of a systematic approach.²⁴

France has the unfortunate habit of making testing commitments that it fails to honour. The previous prime minister had set a goal of conducting at least 700,000 virological tests a week by mid-May 2020²⁵ during a lifting of lockdown measures, a figure that was achieved only three months later.²⁶

To make matters worse, the French authorities have never been able to track infection chains as had been hoped. In 2021, the number of cases followed in contact tracing has on average never exceeded 2.5 per detected Covid case.²⁷ The authorities thought initially they could trace 20 to 25 contacts cases per person contracting Covid to contain the pandemic.²⁸ Equally surprising is that, depending on the week, between 35% and 55% of people who contracted Covid reported no contact cases.

On the criteria measuring closures of **workplaces** (Table 8), public transport, stay-at-home demands or masking requirements, the gap is similar, with more freedoms in the Zero Covid countries.

In all the countries examined, **public transport** (Table 9 page 24) was subject to fairly strict regulations ranging from compulsory masking to recommendations for public transport to be reserved for priority personnel or even prohibited for use by the general public. As indicated in the OxCGRT coding interpretation guide,²⁹ keeping public transport open to everyone (with masking and/or social distancing) is typical of the possibility of exercising the right to access. On this criterion, the Zero Covid countries also do better than the G10 average, with a difference of 0.3 in their favour over a year-and-a-half.

Although **masking** (Table 11 page 24) is not among the criteria used in the Stringency index calculations, it is nevertheless a binding public health measure. In many countries, wearing a mask has come to symbolise a loss of freedom stemming from the virus's appearance. Since it has sometimes been the object of fervent "anti-mask" demands from movements that have made it a symbol of overly intrusive government, we found it worthwhile to include this criterion in our thinking on freedoms. Being able to do away with masking clearly indicates the freedom to leave one's face uncovered, an important element in western cultures. On this criterion, the Zero Covid countries also score 0.4 points lower over the last year-and-a-half.

In all these aspects, freedoms are better preserved in countries that eliminate the virus.

Table 8 : Quarterly indicator of workplace closures

Country	2020-Q1	2020-Q2	2020-Q3	2020-Q4	2021-Q1	2021-Q2	6 trimestres	Strategy
Germany	0.2	2.0	2.0	2.2	2.7	2.0	1.8	Other
Australia	0.2	1.5	2.6	1.8	2.0	1.6	1.6	ZC
Belgium	0.6	2.4	2.0	2.3	2.0	2.0	1.9	Other
Canada	0.5	2.9	2.0	2.5	2.8	2.9	2.3	Other
South Korea	0.5	2.2	2.0	1.2	1.1	1.0	1.3	ZC
United States	0.4	2.8	2.0	2.2	1.9	1.2	1.8	Other
France	0.5	2.3	1.5	2.3	2.3	2.2	1.9	Other
Italy	1.3	2.2	1.8	2.6	2.4	2.8	2.2	Other
Japan	0.4	0.6	0.5	0.6	1.0	1.7	0.8	Other
New Zealand	0.3	1.2	1.0	0.1	0.3	0.0	0.5	ZC
Netherlands	0.4	2.0	2.0	2.4	2.7	1.9	1.9	Other
United Kingdom	0.4	2.6	2.0	2.2	3.0	2.1	2.1	Other
Sweden	0.2	1.0	1.0	1.4	2.0	1.7	1.2	Other
Switzerland	0.5	2.0	1.7	2.2	2.0	2.0	1.7	Other
Zero Covid	0.4	1.9	2.1	1.3	1.3	1.1	1.4	Other
Other strategies	0.5	2.2	1.7	2.0	2.1	1.8	1.7	ZC
Zero Covid advantage vs. Other	-0,1	-0,4	+0,4	-0,7	-0,7	-0,6	-0,3	

Reading: the higher the numbers, the more significant the restrictions. Source: Institut économique Molinari based on Oxford Covid-19 Government Response Tracker, criterion C2_Workplace closing

Table 9: Quarterly indicator of public transport closures

Country	2020-Q1	2020-Q2	2020-Q3	2020-Q4	2021-Q1	2021-Q2	6 trimestres	Strategy
Germany	0.0	0.0	0.0	0.3	1.0	1.0	0.4	Other
Australia	0.0	0.5	1.0	1.0	1.0	1.0	0.7	ZC
Belgium	0.0	0.0	0.0	0.0	0.0	0.2	0.0	Other
Canada	0.0	0.0	0.0	0.0	0.9	1.0	0.3	Other
South Korea	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ZC
United States	0.2	1.0	1.0	1.0	1.0	1.0	0.9	Other
France	0.2	0.9	0.0	0.0	0.0	0.0	0.2	Other
Italy	0.2	0.6	0.0	0.8	1.0	1.0	0.6	Other
Japan	0.0	0.0	0.0	0.3	0.8	0.0	0.2	Other
New Zealand	0.2	0.8	0.0	0.0	0.0	0.0	0.2	ZC
Netherlands	0.1	0.7	0.0	0.2	1.0	1.0	0.5	Other
United Kingdom	0.1	1.0	1.0	1.0	1.0	1.0	0.9	Other
Sweden	0.0	1.0	1.0	1.0	1.0	1.0	0.8	Other
Switzerland	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Other
Zero Covid	0.0	0.2	0.3	0.3	0.3	0.3	0.2	Other
Other strategies	0.1	0.6	0.5	0.6	0.9	0.7	0.6	ZC
Zero Covid advantage vs. Other	-0,1	-0,4	-0,2	-0,3	-0,5	-0,4	-0,3	

Reading: the higher the numbers, the more significant the restrictions. Source: Institut économique Molinari based on Oxford Covid-19 Government Response Tracker, criterion C5_Close public transport

Table 10: Quarterly indicator of stay-at-home requirements

Country	2020-Q1	2020-Q2	2020-Q3	2020-Q4	2021-Q1	2021-Q2	6 trimestres	Strategy
Germany	0.4	0.8	0.0	1.1	2.0	1.7	1.0	Other
Australia	0.1	1.1	2.1	1.4	0.5	0.5	1.0	ZC
Belgium	0.3	1.5	0.6	1.6	2.0	1.4	1.2	Other
Canada	0.2	1.0	1.0	1.0	1.9	1.6	1.1	Other
South Korea	0.5	0.8	1.0	1.0	1.0	1.0	0.9	ZC
United States	0.4	2.0	1.2	1.6	1.7	1.0	1.3	Other
France	0.3	1.3	0.0	1.7	2.0	1.8	1.2	Other
Italy	1.0	1.5	0.3	1.5	2.0	2.0	1.4	Other
Japan	0.0	0.5	0.8	1.0	1.0	1.0	0.7	Other
New Zealand	0.2	0.9	0.4	0.0	0.0	0.0	0.3	ZC
Netherlands	0.3	1.4	1.0	1.0	1.8	1.2	1.1	Other
United Kingdom	0.3	1.5	1.0	1.2	2.0	0.2	1.0	Other
Sweden	0.1	1.0	1.0	1.0	1.0	1.0	0.8	Other
Switzerland	0.2	0.9	0.0	0.8	1.0	1.0	0.6	Other
Zero Covid	0.4	0.9	1.3	1.1	0.8	0.8	0.9	Other
Other strategies	0.3	1.4	0.8	1.4	1.7	1.2	1.1	ZC
Zero Covid advantage vs. Other	+0,0	-0,5	+0,5	-0,3	-0,9	-0,4	-0,3	

Reading: the higher the numbers, the more significant the restrictions. Source: Institut économique Molinari based on Oxford Covid-19 Government Response Tracker, criterion C6_Stay at home requirements

Table 11 : Quarterly indicator of masking constraints

Country	2020-Q1	2020-Q2	2020-Q3	2020-Q4	2021-Q1	2021-Q2	6 trimestres	Strategy
Germany	0.0	1.9	2.0	2.0	2.0	2.0	1.7	Other
Australia	0.0	0.0	2.9	3.1	2.5	2.7	1.9	ZC
Belgium	0.0	1.4	2.7	3.0	3.0	3.0	2.2	Other
Canada	0.0	0.8	2.7	3.0	3.0	3.0	2.1	Other
South Korea	0.2	1.5	2.0	2.9	3.0	3.0	2.1	ZC
United States	0.2	2.9	4.0	4.0	4.0	3.6	3.1	Other
France	0.8	1.6	3.4	4.0	4.0	3.7	2.9	Other
Italy	0.0	3.9	4.0	4.0	4.0	3.9	3.3	Other
Japan	0.3	1.0	1.0	1.2	1.0	1.0	0.9	Other
New Zealand	0.0	0.0	0.9	1.5	2.0	2.0	1.1	ZC
Netherlands	0.0	0.7	2.0	2.0	2.0	2.0	1.4	Other
United Kingdom	0.0	0.8	2.5	3.0	3.0	3.0	2.0	Other
Sweden	0.0	0.0	0.0	0.0	1.4	1.8	0.5	Other
Switzerland	0.0	0.7	2.1	3.0	3.0	2.7	1.9	Other
Zero Covid	0.1	1.0	2.2	2.9	2.8	2.9	2.0	Other
Other strategies	0.2	2.1	3.0	3.1	3.1	2.9	2.4	ZC
Zero Covid advantage vs. Other	-0,1	-1,1	-0,7	-0,2	-0,3	0,0	-0,4	

Reading: the higher the numbers, the more significant the restrictions. Source: Institut économique Molinari based on Oxford Covid-19 Government Response Tracker, criterion H6_Facial Coverings

No significant difference between strategies in cancellation of public events, constraints on organising events or internal mobility

On criteria measuring the cancellation of public events (including religious services) and constraints on organising meetings or internal mobility, the differences are not significant, amounting to plus or minus 0.1 points between Zero Covid and G10 countries.

It is especially interesting to note that Zero Covid does not lead to more **restrictions on internal mobility** than the mitigation strategy. The ability to move within one's own country is obviously an essential criterion in the exercise of personal freedom. The absence of limits on movement is vital in free countries. However, to limit contamination, movement within countries was severely restricted. In the Zero Covid countries. This was even a key element of the strategy.

The *modus operandi* of the Zero Covid strategy indeed relies on zoning, whatever the size of the zone. Once there are no more new cases for 14 days in a given zone, the virus is considered to be eliminated. The zone is then said to be green, and everything can reopen. Zoning is a significant concept in the strategy because it limits the extent of lockdowns when it is necessary to apply them on an ad-hoc basis. It is based on strict limitations on mobility between zones that are not green, in other words where the virus is spreading. When a given zone is under lockdown, the rest of the country can function normally. Green zones are protected without being restricted even when red zones are under lockdown. Once green zones expand, they can be connected, leading eventually to safe mobility between countries on both sides of the hemisphere.

The data on this criterion actually indicate a slight superiority of the Zero Covid strategy. Over the last year-and-a-half, the difference is 0.1, with fewer restrictions in the Zero Covid countries. Zoning is restrictive when it blocks mobility, but over all it protects mobility by providing for a drastic reduction in the spread of the virus and in the ensuing restrictive measures.

Table 12: Quarterly indicator of public event cancellation

Country	2020-Q1	2020-Q2	2020-Q3	2020-Q4	2021-Q1	2021-Q2	6 trimestres	Strategy
Germany	0.6	2.0	2.0	2.0	2.0	2.0	1.8	Other
Australia	0.3	1.8	2.0	1.6	1.3	1.2	1.4	ZC
Belgium	0.4	2.0	2.0	1.7	2.0	1.3	1.6	Other
Canada	0.4	2.0	2.0	2.0	2.0	2.0	1.7	Other
South Korea	1.1	1.6	2.0	1.7	2.0	1.4	1.6	ZC
United States	0.6	2.0	2.0	2.0	1.9	1.2	1.6	Other
France	0.7	2.0	1.2	1.8	2.0	1.5	1.5	Other
Italy	0.8	2.0	2.0	2.0	2.0	2.0	1.8	Other
Japan	0.5	1.0	1.0	1.2	1.0	1.3	1.0	Other
New Zealand	0.4	1.2	1.1	0.1	0.4	0.0	0.5	ZC
Netherlands	0.5	2.0	0.5	2.0	2.0	1.9	1.5	Other
United Kingdom	0.3	2.0	2.0	2.0	2.0	1.7	1.7	Other
Sweden	0.3	2.0	2.0	2.0	2.0	1.7	1.7	Other
Switzerland	0.8	2.0	2.0	1.3	2.0	1.2	1.5	Other
Zero Covid	0.8	1.6	1.9	1.6	1.7	1.2	1.5	Other
Other strategies	0.5	1.8	1.7	1.8	1.8	1.5	1.5	ZC
Zero Covid advantage vs. Other	+0,3	-0,2	+0,2	-0,3	-0,1	-0,2	-0,1	

Reading: the higher the numbers, the more significant the restrictions. Source: Institut économique Molinari based on Oxford Covid-19 Government Response Tracker, criterion C3_Cancel public events

Table 13: Quarterly indicator of restrictions on gatherings

Country	2020-Q1	2020-Q2	2020-Q3	2020-Q4	2021-Q1	2021-Q2	6 trimestres	Strategy
Germany	0.6	4.0	3.6	4.0	4.0	4.0	3.4	Other
Australia	0.5	3.7	3.9	3.8	3.6	3.4	3.1	ZC
Belgium	0.6	3.7	3.7	4.0	4.0	4.0	3.3	Other
Canada	0.6	4.0	4.0	4.0	4.0	4.0	3.4	Other
South Korea	1.0	2.3	4.0	3.3	4.0	4.0	3.1	ZC
United States	0.7	4.0	3.8	3.5	4.0	4.0	3.3	Other
France	1.4	4.0	4.0	4.0	4.0	4.0	3.6	Other
Italy	1.7	2.4	2.0	3.7	4.0	4.0	3.0	Other
Japan	0.0	0.0	0.0	0.0	1.0	1.3	0.4	Other
New Zealand	0.6	2.6	2.1	0.2	0.7	0.0	1.0	ZC
Netherlands	0.8	3.7	3.0	4.0	4.0	3.8	3.2	Other
United Kingdom	0.4	4.0	4.0	4.0	4.0	4.0	3.4	Other
Sweden	0.5	3.0	3.0	3.4	4.0	4.0	3.0	Other
Switzerland	0.9	3.5	3.0	3.7	4.0	3.7	3.1	Other
Zero Covid	0.8	2.7	3.8	3.3	3.7	3.6	3.0	Other
Other strategies	0.7	3.2	3.1	3.1	3.5	3.6	2.9	ZC
Zero Covid advantage vs. Other	+0,1	-0,5	+0,8	+0,1	+0,1	0,0	+0,1	

Reading: the higher the numbers, the more significant the restrictions. Source: Institut économique Molinari based on Oxford Covid-19 Government Response Tracker, criterion C4_Restrictions on gatherings

Table 14: Quarterly indicator of restrictions on internal movement

Country	2020-Q1	2020-Q2	2020-Q3	2020-Q4	2021-Q1	2021-Q2	6 trimestres	Strategy
Germany	0.3	2.0	1.4	0.8	1.8	1.0	1.2	Other
Australia	0.3	2.0	2.0	2.0	1.9	1.8	1.7	ZC
Belgium	0.4	1.5	0.2	0.0	0.0	0.0	0.3	Other
Canada	0.3	2.0	2.0	2.0	2.0	2.0	1.7	Other
South Korea	0.5	0.8	1.0	2.0	1.0	1.0	1.1	ZC
United States	0.3	2.0	2.0	2.0	2.0	1.2	1.6	Other
France	0.4	1.9	1.0	1.1	0.5	0.7	0.9	Other
Italy	0.9	1.4	0.0	1.5	2.0	2.0	1.3	Other
Japan	0.4	0.9	0.8	1.0	1.0	1.0	0.8	Other
New Zealand	0.2	0.9	0.4	0.0	0.2	0.0	0.3	ZC
Netherlands	0.1	1.0	0.0	0.8	1.0	0.9	0.6	Other
United Kingdom	0.2	2.0	1.7	1.7	1.9	0.9	1.4	Other
Sweden	0.1	0.8	0.0	0.6	1.0	1.0	0.6	Other
Switzerland	0.2	0.7	0.0	0.0	0.0	0.0	0.1	Other
Zero Covid	0.4	1.2	1.3	1.9	1.2	1.2	1.2	Other
Other strategies	0.4	1.7	1.4	1.5	1.6	1.1	1.3	ZC
Zero Covid advantage vs. Other	+0,1	-0,6	-0,1	+0,4	-0,4	+0,0	-0,1	

Reading: the higher the numbers, the more significant the restrictions. Source: Institut économique Molinari based on Oxford Covid-19 Government Response Tracker, criterion C7_Restrictions on internal movement

International travel restrictions, the only aspect where Zero Covid is more costly

The virus elimination strategy involves protecting zones that have managed to rid themselves of the virus. The idea is to avoid importing the virus. Therefore, once the virus is eliminated from a country, it may decide to close its borders altogether, as Israel did, or to establish border quarantines to prevent it from spreading in a green zone. Policies may be fairly strict and may include prohibiting the entry of people from certain countries where contamination seems to be out of control.

The Zero Covid countries might therefore be expected to score more poorly on the criterion of freedom of international travel. Indeed, this is the case. The difference between the Zero Covid and G10 countries is to the disadvantage of the former by +0.2 points.

Table 15: Quarterly indicator of international travel restrictions

Pays	2020-T1	2020-T2	2020-T3	2020-T4	2021-T1	2021-T2	6 trimestres	Stratégie
Allemagne	0,9	3,5	3,0	3,0	3,0	3,0	2,7	Autre
Australie	2,1	4,0	4,0	4,0	4,0	4,0	3,7	ZC
Belgique	0,7	3,4	3,0	3,0	3,7	3,2	2,8	Autre
Canada	1,2	4,0	4,0	4,0	4,0	4,0	3,5	Autre
Corée du Sud	1,9	3,0	2,7	2,1	3,0	2,4	2,5	ZC
États-Unis	1,6	3,0	3,0	3,0	3,0	2,9	2,8	Autre
France	1,1	3,0	3,0	3,0	3,0	2,8	2,6	Autre
Italie	2,1	2,8	3,0	3,0	3,0	3,0	2,8	Autre
Japon	2,0	3,0	2,8	2,8	4,0	4,0	3,1	Autre
Nouvelle-Zélande	2,1	4,0	4,0	4,0	4,0	4,0	3,7	ZC
Pays-Bas	0,6	3,0	3,0	3,0	3,0	3,0	2,6	Autre
Royaume-Uni	0,0	0,5	2,0	2,1	3,0	3,0	1,8	Autre
Suède	1,0	3,0	3,0	3,0	3,0	3,0	2,7	Autre
Suisse	0,6	3,0	3,0	2,9	3,0	3,0	2,6	Autre
Zéro Covid	2,0	3,4	3,2	2,8	3,4	3,0	2,9	Autre
Autres stratégies	1,4	2,9	2,9	2,9	3,2	3,2	2,8	ZC
Ecart Zéro Covid vs autres	+0,6	+0,5	+0,2	-0,1	+0,2	-0,2	+0,2	

Reading: the higher the numbers, the more significant the restrictions. Source: Institut économique Molinari based on Oxford Covid-19 Government Response Tracker, criterion C8_International travel controls

One might have expected this difference to be greater since this is a key element of the Zero Covid strategy but not of the mitigation strategy. In countries applying the mitigation strategy, border closure remains a very delicate matter, associated with closing in on themselves and the various consequences that may be feared from this. The data indicate, however, that beyond the words and images used in this regard, restrictions on international movements are a reality for many European countries, including France, Italy, Germany and Belgium, which score 3 or higher for 2020 (with 4 being the score indicating the strictest policies on this criterion).

Limitations on international travel are a reality for all the countries examined and not just for the Zero Covid countries. International travel is a freedom that these countries agree voluntarily to limit drastically in the first instance in order to re-establish it later under more secure conditions. This is an investment and a dynamic between countries that manage to eliminate the virus. They can then consider restoring mobility corridors linking one another. On April 19, 2021, Australia and New Zealand were able for a time to “inaugurate a new space of freedom. It enables their inhabitants to travel from one country to the other without constraints.”³⁰ If most countries decided to implement the Zero Covid strategy and managed to do so sustainably, it would be possible to restore individual freedom of movement on a large scale.

The countries applying the Zero Covid strategy have seen far less erosion of freedoms overall. This is corroborated by Google mobility data at the individual level, as shown in the following section.

Zoom 2: Who is the aggressor, Covid or public intervention?

Freedom is an essential value for people close to the libertarian movement who defend a philosophy based on concepts of rights, obligations, duties and private property, all centred around the principle of non-aggression. This principle is essential to libertarian theory because it states what individuals are legitimately entitled to do and what they are not entitled to do due to violations of the rights of others. As outlined by Murray Rothbard,³¹ a leader of the movement, an individual has the right to defend himself if he is subjected to aggression or to the threat of aggression.

The pandemic, through the numerous public interventions it has spurred, has caused many libertarians to react. The problem with this extraordinary situation lies in identifying the aggressor. The many restrictive measures – interpreted by some as acts of aggression – are intended to avoid contacts between people as a way of preventing aggression by Sars-Cov2. The question at the heart of this matter is to determine who the aggressor is, since the virus is spread through the intermediary of people who are carriers, whether symptomatic or not.

The many measures applied by public authorities inevitably result in losses of freedom for individuals, but depending on how the situation is interpreted, these measures are a means of protecting an individual's fundamental freedom not be attacked by a virus, though they can also be interpreted as acts of aggression that should be fought against.

In an article for the *Journal of Libertarian Studies*, economics professor and libertarian Walter Block examines this problem by considering various statements from eminent libertarians.³² Guido Hülsmann,³³ Philip Bagus,³⁴ Lew Rockwell³⁵ and Richard Epstein³⁶ regard these public interventions as illegitimate. Walter Olson³⁷ and Ilya Shapiro³⁸ say they are.

Walter Block takes an interesting approach: he postulates that it is not possible to judge this matter as a libertarian because we are still missing too much information. He says everyone has their own opinion, but to claim that this is the “correct” libertarian position is, at this stage, something of a gamble. He personally considers that the exercise of freedom does not include the right to attack others nor to threaten others with physical aggression. He says that “the spread of disease could possibly constitute a physical invasion, justifying the use of violence in defence against it.” He considers that “the crime committed by the person who spreads disease should be manslaughter, not murder, unless it is purposeful,” and that “legitimate threats may be met with force.”

This would also be the yardstick for analysing the legitimacy of public interventions and ensuring that they are effective in achieving the intended goal, namely freeing us from the virus.

7. ZERO COVID: MOBILITY THAT STANDS UP BETTER OVER TIME

The countries applying the Zero Covid strategy have experienced far less social and economic deterioration than other countries. Their macroeconomic decline has not been as great.

Mobility data from Google corroborate this analysis at the micro level, showing that “workplace” traffic in the second quarter of 2020 fell by less in the countries applying the Zero Covid strategy (-14 % compared to -36 %). These data also show that Zero Covid countries retained a significant advantage with a 5% reduction in mobility in second quarter 2021, compared to 22% in countries not applying a Zero Covid strategy.

Zero Covid and similar strategies stand out even more when we focus on cafés, restaurants, hotels, non-food businesses and leisure and cultural activities in general. Google data show that traffic in these areas has increased by 1% in second quarter 2021, compared to 2020, in the countries applying the Zero Covid strategy. In the countries applying the mitigation strategy, there was at the same time a significant decline (-15%). This dichotomy has also been found in a country like Canada, where some provinces have been applying a Zero Covid strategy (Zoom 3 page 31).

These data suggest that the French strategy, consisting of sustained efforts to mitigate the virus without eradicating it, stems from a miscalculation, insofar as it does not provide for a return to a near-normal situation.³⁹

Measures such as curfews have been presented as more economical, with a cost of about €6 billion to €10 billion a month, compared to €15 billion to €20 billion for one month of lockdown.⁴⁰ But these respective costs have not been put in perspective regarding how long the constraints are imposed or the scope and duration of the economic and health gains that are generated, including subsequent actions that become necessary due to inadequate control of transmission.

Sound economic analysis involves comparing the intensity and duration of restrictive measures with the intensity and duration of the resulting benefits⁴¹. The data above suggest that the costly nature of lockdowns is not lasting when they help eradicate the virus and remove the restrictions on people and economies on a sustainable basis. Meanwhile, the beneficial nature of curfews and other half-measures fades away when we see that they extend over time, multiplying the economic and social costs, as is the case today in France.

This observation applies in particular to the leisure and cultural sectors. The bill is especially high in France, with some sectors in almost total lockdown for many months (restaurants, cultural activities, etc.). In France, for example, full-service restaurants have been closed for ten months up to now since the start of the pandemic, and some are expecting eight months of closing, with a wave of bankruptcies looming.⁴² Similar concerns and business losses are not found in the same proportions in countries applying the Zero Covid strategy, some of which have large tourism industries.⁴³

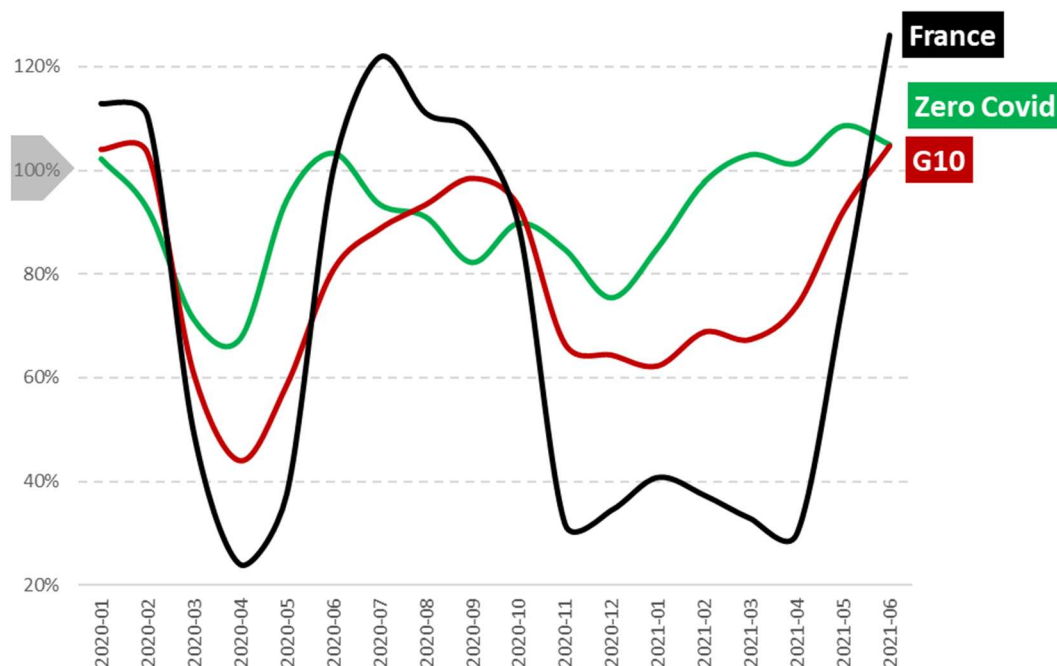
Google data show, for example, that searches for the word “Restaurant” were down especially sharply, with a 29% decline since the start of the pandemic. The overall decline was greater than in the G10 countries (-21%) and three times greater than in the Zero Covid countries, where restaurant are open and searches were down by only 8% (Figure 9 page 30).

Table 16 : Change in Google "workplace" and "leisure and retail" mobility indices compared to a 5-week benchmark period in early 2020 (%)

Country	Workplace														Strategy
	2020 fin T1	2020 T2	2020 T3	2020 T4	2021 T1	2021 T2	2020 et S1.2021	2020 fin T1	2020 T2	2020 T3	2020 T4	2021 T1	2021 T2	2020 et S1.2021	
Germany	-15	-27	-18	-22	-26	-18	-21	-19	-33	-4	-29	-50	-27	-28	Other
Australia	1	-27	-19	-15	-13	-11	-16	-8	-29	-18	-10	-12	-8	-15	ZC
Belgium	-23	-41	-27	-30	-25	-19	-28	-28	-47	-11	-39	-40	-17	-31	Other
Canada	-17	-44	-31	-29	-32	-30	-32	-15	-37	-12	-24	-34	-20	-24	Other
South Korea	-7	-6	-9	-8	-11	-2	-7	-22	-7	-12	-15	-11	4	-10	ZC
United States	-13	-38	-31	-29	-28	-25	-29	-9	-28	-15	-18	-20	-6	-17	Other
France	-27	-43	-26	-28	-25	-23	-29	-31	-53	-9	-34	-42	-27	-33	Other
Italy	-33	-42	-23	-27	-28	-19	-28	-42	-52	-7	-31	-40	-20	-31	Other
Japan	-5	-20	-16	-11	-16	-14	-15	-5	-24	-10	-7	-17	-15	-14	Other
New Zealand	0	-31	-6	-5	-7	1	-9	-15	-49	-9	4	-1	9	-10	ZC
Netherlands	-18	-32	-25	-25	-28	-20	-25	-16	-27	-2	-31	-48	-17	-24	Other
United Kingdom	-17	-55	-35	-34	-42	-29	-37	-18	-67	-26	-38	-58	-25	-40	Other
Sweden	-11	-25	-28	-24	-26	-21	-23	-9	-12	-1	-18	-26	-8	-13	Other
Switzerland	-17	-31	-21	-22	-24	-18	-22	-26	-43	-11	-25	-45	-21	-29	Other
Zero Covid	-4	-14	-12	-10	-12	-5	-10	-17	-17	-13	-13	-11	1	-11	ZC
Other strategies (G10)	-15	-36	-26	-26	-27	-22	-26	-15	-36	-12	-22	-31	-15	-22	Other
Zero Covid advantage vs. other	+11	+22	+14	+15	+15	+18	+16	-2	+19	-1	+10	+20	+15	+11	0

Source: Calculations by the Institut économique Molinari based on the Google Covid-19 Community Mobility Trend. Non-seasonably-adjusted data, weighted averages. We advise against comparing levels between countries on a one-on-one basis as local differences may be misleading. Reading: In the fourth quarter of 2020, workplace traffic in countries with Zero Covid fell by 10% in the Zero Covid countries, 16 points less than in the countries applying another strategy, down 26%.

Figure 9: Restaurants better protected in the Zero Covid countries: the example of changes in the number of Google searches for "Restaurant" compared to the same month in 2019



Source: Calculations by the Institut économique Molinari based on Google Trends, searches for the word Restaurant (France and nine other countries), 레스토랑 (South Korea), Ristorante (Italy), レストラン (Japan) or Restaurang (Sweden). Partial data for March 2021, extracted on March 21, 2021. Averages of aggregations by country, weighted by their respective populations.

Zoom 3: Zero Covid is cost-effective in Canada

The case of Canada⁴⁴ is interesting. The country has followed an elimination strategy in four of its provinces (New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland and Labrador) as well as in its three northern territories (Yukon, Nunavut and Northwest Territories). Meanwhile, a mitigation strategy has been followed in the rest of the country (Alberta, British Columbia, Manitoba, Ontario, Quebec and Saskatchewan).

The Google data show that traffic in “retail and recreation” spaces declined by 17% in the second quarter 2021, compared to 2020, in the places applying the Zero Covid strategy. This is far less than the 31% decline observed in the rest of Canada, where the mitigation strategy is applied.

Visitor numbers to “leisure and retail” locations fell by 3% in the second quarter of 2021 (compared to 2020) in the areas applying the Zero Covid strategy. This decline is far less than in the rest of Canada that apply the mitigation strategy (-21%).

Canada thus benefits from a pilot test area that shows the superiority of the Zero Covid strategy and its feasibility in a democratic continental country.

Change in Google "workplace" and "leisure and retail" mobility indices compared to a 5-week benchmark period in early 2020 (%)

Province	Workplace							Retail and recreation							Strategy
	2020 end Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2020 & S1.2021	2020 end Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2020 & S1.2021	
Alberta	-14	-40	-29	-29	-30	-28	-30	-31	-31	-12	-22	-30	-17	-22	Other
British Columbia	-13	-42	-32	-29	-28	-27	-30	-35	-35	-14	-22	-26	-17	-22	Other
Manitoba	-10	-36	-27	-30	-27	-24	-27	-25	-25	-6	-30	-29	-16	-20	Other
New Brunswick	-14	-37	-25	-24	-27	-20	-26	-22	-22	-1	-11	-23	-1	-12	ZC
Newfoundland and Labrador	-13	-37	-18	-8	-18	-4	-16	-26	-26	5	1	-21	5	-8	ZC
Northwest Territories	-7	-36	-24	-15	-11	-11	-19	-33	-33	-28	-27	-29	-18	-24	ZC
Nova Scotia	-10	-42	-26	-23	-20	-23	-26	-29	-29	-1	-10	-16	-10	-13	ZC
Nunavut	-15	-22	-12	-13	-3	-16	-13	-28	-28	0	0	0	0	-17	ZC
Ontario	-15	-48	-34	-32	-37	-37	-36	-42	-42	-18	-26	-40	-30	-30	Other
Prince Edward Island	-17	-34	-22	-17	-16	-7	-19	-25	-25	13	0	-11	10	-5	ZC
Quebec	-17	-44	-30	-30	-33	-26	-31	-40	-40	-9	-28	-39	-13	-25	Other
Saskatchewan	-13	-35	-23	-20	-21	-19	-23	-26	-26	-4	-16	-23	-7	-15	Other
Yukon	-3	-33	-21	-17	-12	-11	-19	-34	-34	-25	-31	-35	-19	-26	ZC
Zero Covid	-12	-38	-24	-19	-21	-17	-23	-26	-26	0	-8	-19	-3	-12	ZC
Other strategies	-15	-44	-31	-30	-33	-31	-32	-38	-38	-13	-25	-36	-21	-26	Other
Zero Covid advantage vs. other st	+3	+6	+8	+11	+12	+14	+9	+12	+12	+13	+17	+16	+18	+14	

Source: Calculations by the Institut économique Molinari based on the Google Covid-19 Community Mobility Trend. Non-seasonably-adjusted data, weighted averages. We advise against comparing levels between provinces on a one-on-one basis as local differences may be misleading.

Zoom 4: Zero Covid, unrepresentative islands or authoritarian countries?

Some people regard the performance of the Zero Covid countries as non-reproducible. They say these countries' success is linked to their island status or to an approach that is hostile towards freedom.⁴⁵

This view is not based on facts. Beyond the example of the Canadian provinces that have successfully applied Zero Covid, it is worth comparing the performance of OECD islands countries that are part of the Commonwealth.

Britain has recorded 61 times more deaths than Australia and New Zealand. Its economic decline was four times more pronounced in 2020. In Q1 2021, GDP was down 9% from Q4 2019 in the UK, while it exceeded pre-crisis in Australia and New Zealand. The *Stringency Index* is 20% higher in the United Kingdom, with more severe restrictions than in the island countries of Oceania. Also the decline in mobilities was 3 times higher according to Google data.

Commonwealth Islands in the OECD	Deaths per million population (as of 06/30/2021)	Change in GDP in 2020 (in % vs 2019)	Change in GDP in Q1.2021 (in % vs. Q4.2019)	Average StringencyIndex (2020 and S1.2021)	Decline in workplace mobility (2020 and S1.2021)	Decline in leisure and retail mobility (2020 and S1.2021)
United Kingdom	1891	-9.8%	-8.8%	62	-37	-40
Australia and New Zealand	31	-2.6%	1.0%	52	-14	-14
Australia	36	-2.5%	0.8%	55	-16	-15
New Zealand	5	-2.9%	2.5%	33	-9	-10
Gap to the disadvantage of the United Kingdom	1 861	-7.2%	-9.9%	10	-22	-26
Multiplier to the disadvantage of the UK	x 61	x 4	x 9	x 1,2	x 3	x 3

Sources: Calculations by the Institut économique Molinari based on figures from the OECD, OurWorldInData, OxCGRT and Google Covid-19 Community Mobility Trend.

Contrary to common belief, this difference does not result from Australia's and New Zealand's isolation. These two countries are integrated into vast trade networks. Travel and tourism play a significant role in their economies (11% of GDP), more than in Britain (9% of GDP).

Very mindful of freedoms, these islands top the human and economic freedom rankings of the Cato Institute (United States) and the Fraser Institute (Canada), well ahead of Britain and France, a further indication that Zero Covid and civil liberties are compatible.

Like us, Australia and New Zealand have had to contain the epidemic, which reached their shores. Unlike us, they considered that it was crucial to make this societal effort cost-effective over the longest possible period. The countries of Oceania got organised to prevent the pandemic from starting again, enabling them to preserve their societies more effectively. By tracking infection chains with the famous test-track-isolate approach and by thinking locally, they were able to make do with micro approaches to the occasional reappearance of the disease. This approach was far less costly than that taken by the countries of Europe, which have undergone several epidemiological waves and have greatly increased restrictions that were harmful to the economy and to freedoms. Our choice resembled that of a firefighter who manages to overcome a blaze but, for lack of organisation to avoid its resurgence, is forced to face a second outbreak and then a third one – obviously a counterproductive approach.

8. ZERO COVID: GREATER VISIBILITY AND LESS UNCERTAINTY

A crucial factor in analysing the effectiveness of the strategies that have been implemented is control over the uncertainty linked to the dynamics of the virus, found with both. After all, participation in economic and social life is a function of people's confidence in being able to take part without running the risk of falling ill, contaminating others or seeing health services overwhelmed.

It is not only government-imposed restrictions that reduce movement. Voluntary decisions by individuals to cut back on social life in the face of a fast-spreading virus also play a key role.

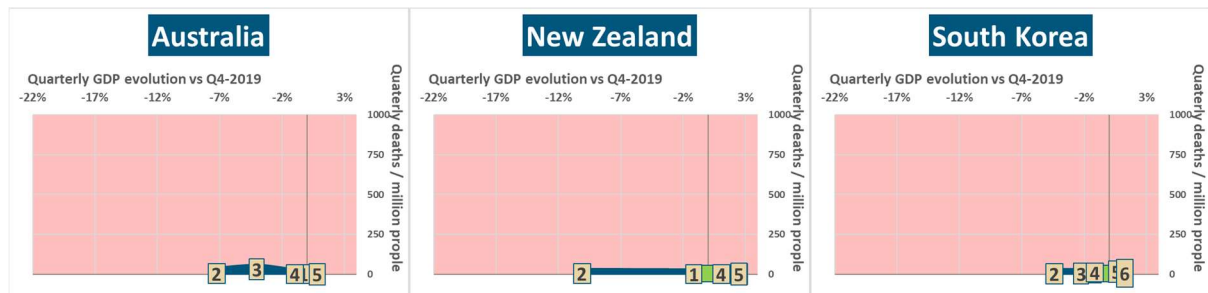
The Swedish example shows the importance of this phenomenon since, even without a lockdown, the decline in mobility was significant. This explains why Sweden's economic contraction was close to the levels observed in Scandinavian countries that went into formal lockdown.⁴⁶

This has been shown by scientific studies both in South Korea and the United States.⁴⁷ The South Korean case is similar in some respects to that of Sweden because a strict lockdown was never imposed there. However, mobility was heavily reduced in high-spread areas in South Korea. This led the authors of an analysis to state that "a one per thousand increase in infections leads to a 2 to 3 percent drop in local employment in the absence of lockdowns. In comparison, non-causal estimates of this coefficient for the United States or United Kingdom, which implemented large-scale lockdowns, range from 5 to 6 percent, suggesting that about half of their job losses may be due to voluntary reductions in economic activity by private businesses and consumers, rather than a consequence of government-mandated lockdowns."⁴⁸

The IMF estimates that, in developed countries in general, individual choices to practise social distancing account for more than half of the decrease in mobility, with a greater impact than government-imposed mobility restrictions.⁴⁹ Indeed, the prevalence of the virus is the most significant predictor of individual participation in social and economic life. The lifting of restrictions when the virus is continuing to spread does not allow for a full recovery. This explains, at least in part, the success of the Zero Covid strategy. By eliminating the spread of the virus, the return to normal life can be more complete. This is how Michael Baker, who devised New Zealand's strategy, explains support from the wealthiest New Zealanders⁵⁰ for the elimination strategy. "They said, 'We didn't get filthy rich by not being good at assessing and managing risk.' They were in it for the long haul." Where the elimination strategy is implemented, the end of the tunnel becomes predictable, and it is then possible to make reliable long-term plans, resulting in stronger economic performance and lower mortality.

Cross-referencing of quarterly economic and health data confirms the superiority of this approach in terms of visibility. The course taken by the Zero Covid countries is consistent, with sustained improvement in indicators (Figure 10 page 34). People in those countries benefit from a level of visibility enabling them to project their societies and economies into the future.

Figure 10 : Quarterly dynamics of Zero Covid countries eliminating the pandemic and benefiting from social and economic visibility



Interpretation: The closer that countries get to the green square in the lower right, associated with Q4 2019 GDP (pre-crisis) and with an absence of mortality from Covid-19, the more they converge towards a return to normal. 1=Q1.2020, 2=Q2.2020, 3=Q2.2020, 4=Q4.2020, 5=Q1.2021, 6=Q2.2021. Sources: Institut économique Molinari based on actual GDP compared to Q4 2019 based on OECD figures (quarterly accounts, VPVOBARSA series in US dollars, volume, purchasing power parity, seasonally adjusted, extracted on 07/31/2021) and OurWorldInData (Cumulative confirmed COVID-19 deaths per million people).

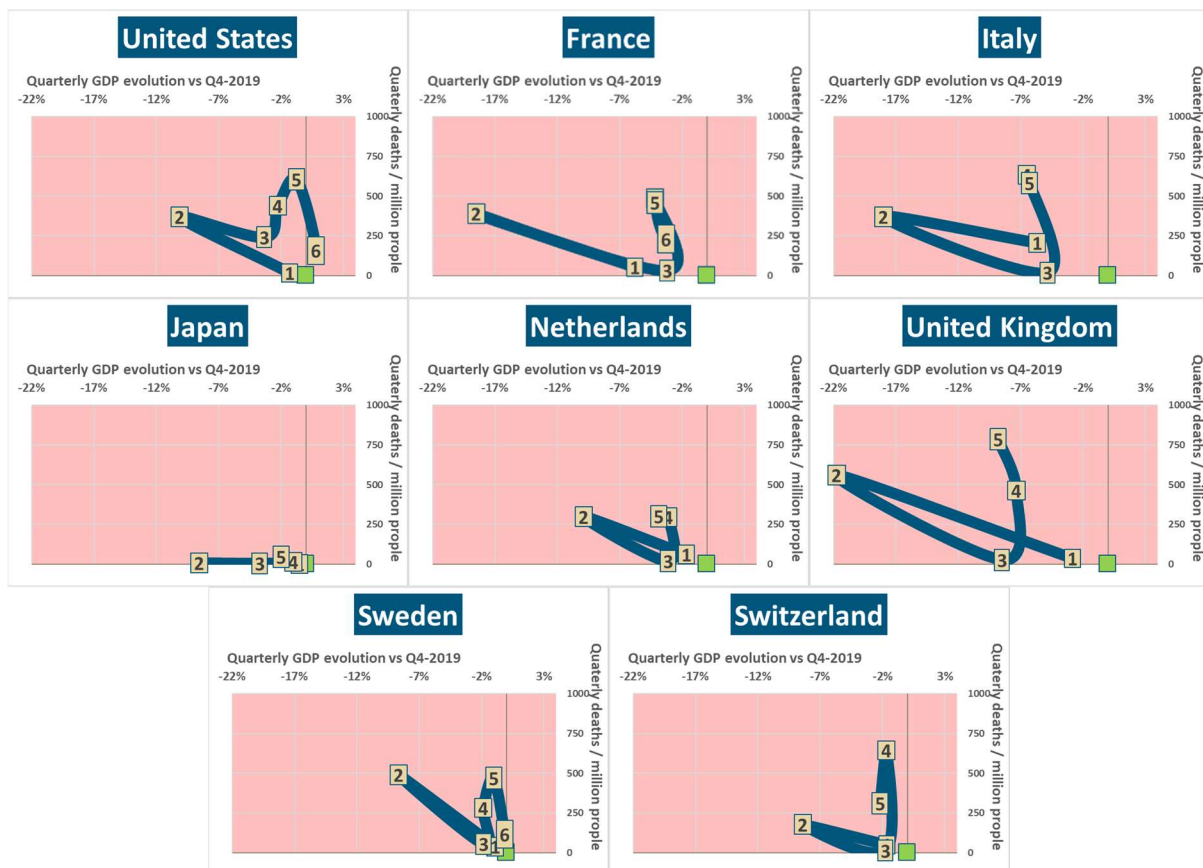
In contrast, the course taken by the G10 countries has produced fluctuations. We saw a rebound of the epidemic everywhere in the fourth quarter of 2020, except in Japan, and in certain countries in the first quarter of 2021 (Germany, United States, United Kingdom, Sweden). The mitigation strategy is causing them to seesaw, making it difficult to project into the future⁵¹ and thereby penalising societies and economies (Figure 11 page 34). This is especially problematic for businesses that depend on significant social interaction, which have been closed for months, as representative of the hotel,⁵² restaurant,⁵³ culture⁵⁴ and recreation sectors have stated repeatedly.

From a tactical standpoint, the countries that have opted for a mitigation strategy, whether voluntarily or tacitly, have continued to suffer from deaths and economic setbacks. At this stage, everything depends on their ability to vaccinate people quickly and on a massive scale. The last few months have shown that this process is not as simple as expected, due to logistical constraints and to resistance from part of the population. They find themselves forced to organise vaccination campaigns on the fly, with no certainty of achieving herd immunity, whereas the Zero Covid countries could use vaccination as an element to strengthen the robustness or anti-fragility⁵⁵ of their overall strategy.

New variants are contributing to more rapid transmission and lethality, and thus more limited opportunities to relax restrictions in view of higher disease and mortality within the mitigation framework, leading to even higher accumulation of economic costs.⁵⁶

Figure 11 : Quarterly dynamics in the G10 countries that did not eliminate the pandemic and that lack social and economic visibility, except Japan





Reading: None of these countries, other than Japan, is managing to move closer to the green square in the lower right, associated with the pre-crisis level (Q4 2019 GDP) and with an absence of mortality from Covid-19, the more they converge towards a return to normal. 1=Q1.2020, 2=Q2.2020, 3=Q3.2020, 4=Q4.2020, 5=Q1.2021, 6=Q2.2021. Sources: Institut économique Molinari based on actual GDP compared to Q4.2019 based on OECD figures (quarterly accounts, VPVOBARSA series in US dollars, volume, purchasing power parity, seasonally adjusted, extracted on 07/31/2021) and OurWorldInData (Cumulative confirmed COVID-19 deaths per million people).

Zoom 5: How to act in an uncertain world?

The economist Friedrich A. Hayek, winner of the 1974 Nobel Prize in economics, is especially well known for his work on information problems.⁵⁷ In his writings on knowledge, Hayek shows that it is a fundamental aspect of equilibrium in the real market, which by its very nature is uncertain.

Equilibrium assumes knowledge of the circumstances of time and space as well as scientific knowledge. However, knowledge of the circumstances of time and space is possessed by scattered individuals whereas scientific knowledge is possessed centrally by experts. In order to have “perfect” knowledge, in other words to get expectations to match, scattered individuals require scientific knowledge and experts require knowledge of the circumstances of time and space.

There is a need to communicate knowledge between them. How best to proceed? Is it better to transfer knowledge from individuals to experts, or is it more effective to go the other way around? The aim is to make knowledge available to all. Hayek chose decentralisation because knowledge of the circumstances of time and space is fundamental, being the cause of change.

Change makes action necessary. But action will be taken only by people who are familiar with change. These are the scattered individuals. To act correctly, these individuals also require scientific knowledge and knowledge of the circumstances of time and space that other people possess.

The task might seem impossible were it not for the price system that provides knowledge in abbreviated form. “The most significant fact about this system is the economy of knowledge with which it operates, or how little the individual participants need to know in order to be able to take the right action,” Hayek

wrote. The price system is “a kind of machinery for registering change.” It condenses information and enables individuals to adapt to change in the most effective way, the way that leads to general equilibrium.

In complex systems such as human societies, this information-condensing system provides for efficient navigation. However, there are situations – such as a pandemic – where this system is not optimal. Hayek himself recognised this, as indicated in a note on this subject from the Institute of Economic Affairs. Mark Pennington, the author of this note, writes: “Given the character of pandemics as public health problems that involve significant externalities, market solutions and those based on voluntary associations may not be viable, so the Hayekian perspective is consistent with endorsing some form of public policy response.”⁵⁸

The question is: what forms of public policy are useful in this context? Essayist, philosopher and trader Nassim Taleb is helpful in this matter. This expert on risk has spoken out on various occasions to explain that it was necessary to act quickly and decisively, emphasising that public intervention to complement individual efforts in blocking the pandemic was legitimate.

An admirer of Friedrich Hayek, Taleb shares his notion of the importance of decentralisation, and he favours localism. In an interview with the French weekly magazine *Le Point*, he said: “I am a libertarian in the American sense of the word. Sad to say, we need authority, and it has to be exercised on a reduced scale, which is why I think libertarianism should lead to localism. I see that the modern system of democracy is not working well, except on a small scale. When a city is decentralised, it can decide to close its gates, as some Italian city-states did in the 14th century. Localism provides democratic solutions by allowing for a common decision-making process.”⁵⁹ But like Hayek, Taleb sees a role for government in times of crisis, whether health-related or military.

Despite progress in medical science, globalisation is increasing the risks from communicable diseases and pandemics. They can now spread much more quickly. They can evolve and become more dangerous. There is a multiplicative, exponential effect that radically changes the dynamics.

For this reason, says Taleb, “you have to think in terms of the unknown and not the known.”⁶⁰ It is vital to prepare for the worst that the virus may hold in store in order to preserve what is crucial and thus put ourselves in a position to benefit from all available options such as that offered today by vaccines. The matter of optionality⁶¹ is essential in Taleb’s thinking. It is a principle of management in a situation of uncertainty, because it avoids the need to be intelligent. It consists of putting ourselves in a position of avoiding the worst in order to benefit from possible gains.

In this context, the Zero Covid strategy meets Taleb’s criteria. By eliminating the virus, as was done with the Ebola virus, it is possible to avoid deaths and regain freedoms, returning to normal life and rebounding sustainably from an economic standpoint.

The experiment conducted in the countries of Oceania also corresponds to one of the recommendations from Mark Pennington, who writes: “The task here is to find mechanisms that allow for experimentation and feedback that is somewhat analogous to that provided by markets,” emphasising “the importance of generating counterfactuals to allow for policy learning.”⁶² Indeed, the Zero Covid countries offer precisely this type of experimentation, showing their superiority in economic and health matters and in terms of freedoms.

9. CONCLUSION

Analysis of data on mortality, economic growth, civil liberties and mobility shows that health, economic and social interests are aligned in the Covid-19 context.

The countries that minimised the spread of the virus by means of a Zero Covid strategy are coming out of it the best. They are seeing significantly fewer deaths, their economies are performing more strongly and their people are not held back to the same degree by mobility restrictions, whether voluntary or mandatory. Nor have they had to cancel other medical treatment.⁶³ They are in a position to institute gradual and well organised vaccination campaigns, they have held the number of people showing long-term symptoms (long Covid) to a minimum, they can keep schools open without compromising the health of children or their teachers and, with little contamination, they are minimising the risk that variants will appear, with higher levels of transmission, lethality, and immunity evasion.

Countries in the grip of a significant spread of the virus have faced tough times. In addition to illness and death, economic and social activity is stymied, with significant restrictions, declining mobility and a lack of visibility.

This calls for a thorough analysis of the costs and benefits of the Zero Covid strategy as compared to France's mitigation strategy, which is inconclusive at this stage, the expected benefits of which are in question.

The elimination strategy is also the most decent strategy because it enables us to avoid moving gradually towards unacceptable situations such as leaving our elders in dismal conditions, failing to protect our children adequately in schools or ostracising those who are unwilling or unable to be vaccinated but who are prepared to make other efforts. As philosopher Isaiah Berlin wrote: The goal should be the maintenance of a precarious equilibrium that avoids, as far as possible, desperate situations and intolerable choices. This is the primary requirement of a decent society.

10. RECOMMENDATIONS

1. Stop presenting vaccination as a substitute for all other measures to control Covid-19. Feedback from other countries shows at this stage that vaccines alone do not eliminate the epidemic. Rather, their experience suggests combining vaccination campaigns with a Zero Covid approach.
2. Urgently protect schools for the start of the 2021 school year with: the systematic installation of CO₂ sensors in classrooms; outfitting of lunchrooms (air purifiers, possibility of boxed lunches, etc.) to limit contamination associated with food service; systematic saliva testing for pupils twice a week; true school online continuity for children with Covid or contact cases who are required to stay at home.
3. Open a dialogue connecting the central government and local representatives with experts in countries that are applying the Zero Covid strategy.
4. Support the establishment of pilot projects in areas where local executives are receptive to the advantages of a Zero Covid strategy.
5. Organise missions to evaluate Sars-Cov2 control strategies in parliamentary assemblies and Organise information missions on long Covid among children and adults.
6. Introduce the Zero Covid strategy in the analysis of risks related to the health crisis at the French and European levels. The European Union could be a major player in strategy coordination in the same way as its investment in the purchase of vaccines.⁶⁴

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⁶¹ In *Antifragile*, Nicholas Nassim Taleb expresses a criticism of Friedrich A. Hayek, stating that Hayek may not have understood the idea of optionality. “We may be drawn to think that Friedrich Hayek would be in that antifragile, antirationalist category. He is the twentieth-century philosopher and economist who opposed social planning on the grounds that the pricing system reveals through transactions the knowledge embedded in society, knowledge not accessible to a social planner. But Hayek missed the notion of optionality as a substitute for the social planner. In a way, he believed in intelligence, but as a distributed or collective intelligence—not in optionality as a replacement for intelligence.” Nassim Nicholas Taleb, *Antifragile: Things That Gain from Disorder*. PenguinRandomHouse, 2012.

⁶² Mark Pennington, *The Response to the Pandemic: A Hayekian View*. Institute of Economic Affairs, 2020. Available at <https://iea.org.uk/publications/the-response-to-the-pandemic-a-hayekian-view/>

⁶³ FranceInfo. 2021. “Déprogrammation d’opérations à cause du Covid-19 : ‘Des milliers et des milliers de personnes périront de leurs cancers’ dans les ‘5-6 ans’, prévient Axel Kahn”. Franceinfo, March 9, 2021. Available at https://www.francetvinfo.fr/sante/cancer/deprogrammation-d-operations-a-cause-du-covid-19-des-milliers-et-des-milliers-de-personnes-periront-de-leurs-cancers-dans-les-5-6-ans-previent-axel-kahn_4326127.html.

⁶⁴ The EU adopted a green zoning strategy on October 9, 2020 (Council of the European Union 2020). Since then, the European Centre for Disease Prevention and Control (ECDC) has published a weekly map differentiating regions by colour. See Bary Pradelski, Miquel Oliu-Barton, “Green zones: Turning Europe’s strategy into a success”, VoxEU & CEPR, February 9, 2021. Available at <https://voxeu.org/article/green-bridges-reconnecting-europe-avoid-economic-disaster#1>

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