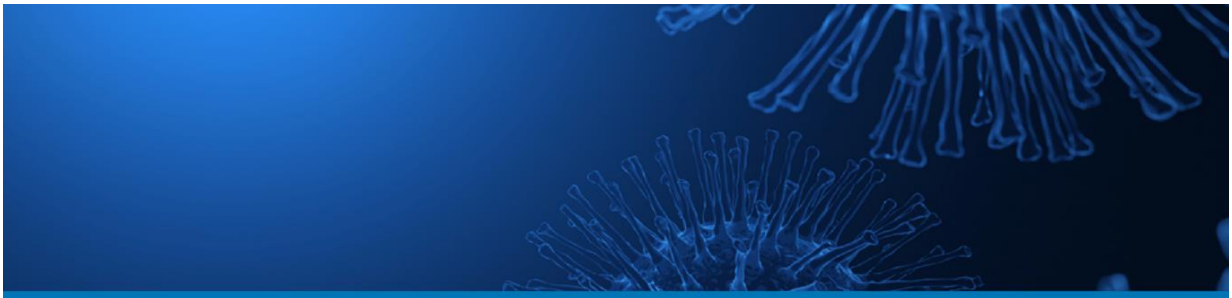

COVID-19
UK Political Analysis

By Tim Hames, Senior Adviser | 7th May 2020

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When in Rome. What the UK Government is likely to learn from the evidence of the virus in Italy.

A slightly restless nation (and even more frenetic media) awaits the latest update from the Prime Minister and Government about the status of the lockdown in the United Kingdom. It is likely to be largely disappointed. As set out in the FTI UK Political Analysis of April 3rd (Taking Back Control. An unofficial timetable in Whitehall which depends on mass anti-body testing), the steps to be set out shortly will mostly be small and symbolic rather than sizeable and substantive, with the more meaty decisions made in advance of the second May Bank Holiday. That should be a meaningful moment.

In the meantime, attention has turned to the fact that the UK appears to have overtaken Italy in the raw number of fatalities (although comparisons of this kind are challenging). This should not be any sort of surprise. As the FTI UK Political Analysis released on April 17th (Re-entry Riddle. Why lifting the lockdown in the UK will be harder than elsewhere in Europe) observed, “It will be a considerable achievement (or extraordinary fortune) if the UK is not at the top of the grim European table for the overall number of deaths recorded” but that “it will probably not have that status in terms of the proportionate death rate, other than micro-states, Belgium is destined for that tally.” (This will be the

very last paragraph in this piece to refer to past predictive success I promise you absolutely).

Focusing on Italy is, nonetheless, a worthwhile exercise not least because it is a racing certainty that the leading scientific advisers to ministers will be doing so. It is a far more appealing place to look for evidence and examples than the likes of China, South Korea and Singapore whose societies are just too different from our own to adopt as a baseline. Earlier this week, a team from Imperial College, London published a major study on the impact of the lockdown in Italy and what the consequences of lifting it to various degrees may be (it is Report 20: Using mobility to estimate the transmission intensity of Covid-19 in Italy: A subnational analysis with future scenarios). Perhaps mercifully, this set of scientists did not include Professor Neil Ferguson as a leading light (as his private life has now become a matter of near obsession to the likes of The Daily Telegraph) as that would be distracting. This research is worth serious contemplation in the course of a subdued Bank Holiday weekend.

Italy as a proxy for the United Kingdom.

Italy is an interesting proxy for the UK but subject to a number of conditions that need recognition.

The first is that Italy has been an inadvertent initial patient in a massive medical trial. It was the first nation in Europe to experience a major coronavirus crisis and this emerged very swiftly over the long weekend of February 21-24 in what was almost a Pearl Harbour incident. It was also, therefore, the first country to impose a lockdown. It started to do so regionally (centred on Lombardy) but this proved to be a massive mistake as many of the young and the mobile there with family or friends elsewhere in the country fled and spread the disease with them as they did so. That obliged the authorities in Rome to impose a lockdown everywhere which served as a model for others when they had to decide how to suppress the virus. Italy has been something of a guinea pig ever since.

The second is that the nature of the lockdown in Italy has generally been somewhat tougher than in the UK. Italy went almost instantly to the full repertoire of case isolation, the wholesale closure of schools and universities, wide-scale social distancing, the banning of mass gatherings/public events and severe limitations on movement. Lifting the lockdown in the UK begins from a different place.

The third is that population character in Italy and the UK (a crucial factor in the reproduction number for the coronavirus) is far from identical. Italy has a smaller population than the UK (60.46 million to 67.89 million), it has a smaller overall population density (206 persons per square kilometre to 279 persons), fewer people live in settlements of one thousand people or more (70.9% to 91.9%) and the city which served as the epicentre for the outbreak there (Milan) is 6.5 times smaller than is London. All of this reinforces the complications which Whitehall has to endure in formulating its strategy.

The fourth, and a counter-acting force, is that the age profile of Italy is very distinct from the UK. Italy has the highest percentage of citizens aged 65 and over in Europe (21.7% of the total). The UK number is much lower (17.7%) which is less than the median figure for western and central Europe. The difference is so marked it means that although there are slightly more than 7.4 million residents of the UK than Italy, the actual number of Italians over 65 is about 100,000 more than in this nation. Italy has had to face the dilemma of an atypically large set of people who are vulnerable to the virus.

Finally, there are important differences in social structure and family life between Italy and the UK. It is much more normal for older people to live in inter-generational dwellings with younger members of their extended family or, alternatively, to live in close travelling distance to them. The number of Italians whose permanent abode is some form of care home is strikingly small by the standards of northern Europe. This is, admittedly, rather less true in northern cities such as Milan but it is still an element that has to be taken into account by the Italian Government as it determines how it should ease the restrictions that it has imposed and has to be thought about by the UK authorities as they ponder their options. In this instance, public policy is less constrained in London than it is in Rome.

What does the Imperial College, London study reveal?

The team at Imperial took evidence of infection rates and death rates from across all twenty of the regions of Italy but with a particular intensity for the seven regions where there have been more than 500 deaths from the virus (Lombardy, Emilia-Romagna, Piedmont, Veneto, Liguria, Marche and Tuscany). They also analysed data that became available from the Google Mobility Report for Italy, looking at residential movement and transit station activity and an average of four other dimensions (retail and recreation, groceries and pharmacies, parks and workplaces). They then simulated eight weeks in to the future what are the best estimates for infection levels and numbers of added deaths if the lockdown were to be (a) maintained exactly as it is (b) eased to allow a 20% return to the pre-lockdown level of activity and (c) loosened to permit a 40% return to the pre-lockdown local norm.

The results are fascinating and instructive. The ones which will be highlighted here are that.

- Infection rates vary enormously across regions. The highest is Lombardy at 13.3%. The lowest is Basilicata at 0.44%. The overall national attack rate is estimated at 4.76%. It is entirely reasonable to believe that this is broadly true for the United Kingdom as well.
- There are plenty of reasons to believe that this is an undercount on infection rates due to the absence of universal testing and the degree of asymptomatic infections that is such a critical and abnormal aspect to this coronavirus but even if one were to double this figure for the “attack rate” to about 10% (not unreasonable) this would still leave Italy a very long way indeed from the sort of infection level needed to trigger herd immunity (60%-70%). This is, again, a finding that almost certainly has valid application in the United Kingdom too.
- The Infected Fatality Rate (or death rate) of those who contracted the virus was, by contrast, much more consistent across the entirety of Italy varying from 1.1% to 1.4% in almost every region and with the relatively tiny differences virtually entirely explained by regional profiles in age. As the UK is a younger society it would be fair to imagine an IFR of 0.8% to 1.1% here.

- The fabled R number (the reproduction of transmission statistic) is believed to be below one in every Italian region thanks to the lockdown measures introduced nationwide. Yet there is quite a wide variation by region from 0.5% in the (small) Aosta Valley to 0.9% in Veneto and there are a number of sizeable regions which are not that much below one for this number. At first glance this is strange allowing for the strength of the lockdown provisions, but it may be because the reproduction rate within households (or "small world settings" as they are sometimes labelled) has been higher in Italy due to its social structure than in other places. The best guess is that the level of regional diversity and overall R number is lower in the UK.
- There is a substantial difference across the estimated new levels of infection inside Italy between a mild liberalisation (a return to 20% pre-lockdown figures) and a modest change (40% of the pre-lockdown mobility). In Piedmont, where the infection rate is today thought to be 7.84%, it moves up to 19.64% at the 20% easing and a startling 54.18% on 40% easing. Strikingly large numbers are also recorded for other big regions like Tuscany and Veneto.
- This is even more true when it comes to the estimates of the total extra deaths calculated under the 20% shift and 40% move illustrations. At 20%, the spread of additional deaths in Italy is 3,000 to 5,000 with a headline number of 3,700. At 40%, that range becomes 10,000 to 23,000 with a headline number of 18,000. Put differently, doubling the amount of free movement restored results in a 3.5 times rise in fatalities. As the differing demographic factors between Italy and the UK (population density versus age profile) crudely cancel each other out, these numbers would appear to be credible to import into a UK setting as well.
- The consistent pattern across both infection rates and death rates in Italy is that sizeable regions which were not that badly hurt when the virus first struck, and then benefited in terms of mortality avoidance because of the lockdown, are the hardest hit as the result of loosening the lockdown (hence the Piedmont figures). Those who were struck first and with most impact have a lesser exposure once some mobility is restored because, if nothing else, those who were disproportionately vulnerable were infected at the first time of asking. In a UK context, the fragile regions would seem to be Yorkshire/Humberside and the North East.

- This dramatic distinction between 20% and 40% is driven by the fact that for many regions of Italy, a restoration of 40% of pre-lockdown movement moves the R number above one and it is at that point that infection and death rates resume a potentially sharp upward pattern. There is no obvious reason why this would not be true in the United Kingdom as in Italy.
- Furthermore, these estimates do not take any account of cross-regional movements (which would surely occur). Such activity would be very likely to increase infections and deaths in those regions which had not experienced major trauma in the first phase of coronavirus. To that extent, the figures set out for infection and death rates could be an underestimation.
- However, and of fundamental importance, these estimates also make no allowance for the impact of social distancing measures in public spaces and public transport, alongside the perhaps compulsory use of some variety of personal protective equipment, nor do they factor in what effect a system of tracking, tracing and testing might have on death rates. Nor do they assume that certain sections of society are urged to remain in self-isolation for a far longer period than others in order to avoid the risk of infection. They instead work on the notion that loosening a lockdown implies being allowed to do less of what one used to do than before (but more than during the lockdown) in much the same manner as previously.

As it is highly unlikely that such a liberal approach would be embraced in Italy or in the UK these estimates are almost certainly, as the Imperial authors concede openly, “pessimistic”. The real tipping point for R is probably higher than a return to 40% of previous mobility but it is extremely unlikely to be as high as the restoration of 100% of pre-lockdown activity.

The implications for the United Kingdom.

There are several implications for ministers, officials and advisers in the United Kingdom of this data.

First, liberalisation of the lockdown has to be phased and the opening steps have to be incremental. This is especially true for what might be described as Phase 2(a) which is about to be announced as it will not be accompanied by either a mass antibody testing capacity (as had been hoped and indeed anticipated several weeks ago) nor will the NHS App currently being trialled be available at scale.

Second, a very hard-line on social distancing will have to be maintained throughout the process but particularly in Phase 2(a) when it has to be the main weapon in limiting the adverse effects of any easing of the lockdown (it is clear that the leading scientists offering counsel to ministers are rather sceptical about the advantages of universal face masking and are concerned that it might even be thoroughly counter-productive if it leads to a false sense of security and weaker social distancing).

Third, any series of measures adopted during Phase 2(a) that it was believed would result in a rise in mobility to an extent that is larger than 25% of pre-lockdown movement, even with strict and widely obeyed social distancing, would probably be regarded as unduly risky. Even 20% might also be too.

Fourth, even when we reach Phase 2(b), which if Phase 2(a) proceeds smoothly will be after the second May Bank Holiday, some considerable caution will be required because the impact of the App will take time to emerge and some trial and error in its utilisation is all but inevitable. Even with vigorous social distancing, it would be brave to accept a new series of liberalisations that were likely to take overall mobility levels to much over 60% of pre-lockdown levels and in so far as that number was reached it would be through lower risk initiatives such as allowing schools to return. It would be entirely rational, on the basis of the Imperial study and the difficulties in modelling the effect of social distancing and the App instantaneously, to make a 50% increase the undeclared ceiling.

Fifth, absent unexpected positive developments (such as pregnancy test types of antibody testing arriving on the scene or unseasonably warm weather proving to be hostile to the virus), it is very reasonable to deduce that we will not move towards 75% of past mobility until Phase 2(c) when the impact of the App is fully understood and confidence in it is commanded. That is about mid-June. This could well be an optimistic assessment if the R number is at risk of moving above one again.

Sixth, to reach even that level will require more than social distancing and the App alone can do. It would need regular antigen testing at a capacity hugely in advance of 100,000 cases a day (because people who test negative will have to be re-tested, possibly frequently depending on occupation). It would be assisted by advancement in drug treatment of coronavirus which convinced scientists that the infected fatality rate was falling to below the 0.8%-1.0% range and, ideally, there was reason to expect that a vaccine was in sight which would first be deployed to liberate the most vulnerable.

Seventh, Phase 2(c) is likely to be followed by a Phase 2(d) in which something close to a full return to mass transit and travel is achieved. The London Underground is the biggest single problem in the domestic sphere. International travel by air is an extraordinary challenge. The concept that has been floated of a mandatory 14-day quarantine period for visitors is manifestly not a medium-term plan. Who on Earth would want to travel to a country for a customary two week leisure break to spent it effectively behind bars (the wrong sort of bars) and who would opt to embark on a business trip 15 days ahead of the scheduled meeting so that they could spend 14 days isolated before it happened?

The far more logical approach would be to test people at the point of departure and not on arrival and then allow them to enter the community reasonably freely once they are at that place. To do this, though, means countries having to trust other countries to conduct those tests competently or, conceivably, in instances where there is a lot of travel between two countries, introducing airport passport and screening arrangements based on those that exist for the Eurostar (plus testing).

Finally, even at the end of Phase 2(d) it is unlikely that mobility will return to pre-lockdown levels. A more realistic target, this side of a vaccine, is about 80% of such activities and that might take to the Autumn to be witnessed. There will remain huge incentives for the UK Government, with the issues around population density that it has to deal with, firmly to encourage businesses and individuals to work from home if this is possible (even if less profitable), to want to deter travelling upon the Tube and to be very wary about mass gatherings (with those inside a larger concern than those outside).

In all of this, information obtained from Italy, as the unfortunate first victim of the virus in Europe, is certain to be incredibly important. The Imperial work cited here will be but the first of many papers. How candid ministers are willing to be about the hard road ahead will become a little clearer shortly.

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