

STG Resilience Papers

Walking the Post-Pandemic Talk: How to Incorporate Resilience in Better Regulation Systems

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Summary

- The pandemic revealed at once the lack of preparedness of many governments, and the inadequacy of existing scientific advice mechanisms in times of emergency.
- Use of foresight techniques and meaningful scientific advice can help governments anticipate possible low-probability, high-impact events that could have a disruptive impact on the economy and society. However, these techniques should be fully embedded in the policy cycle.
- Policies should be stress-tested regularly to ensure that they remain relevant and able to withstand unforeseen shocks.
- The bottom-up nature of contemporary policy evaluation is, by design, incompatible with long-term objectives such as ensuring systemic resilience.
- Rather than cost-benefit analysis, a more suitable decision-making criterion in policy appraisal would be the adoption of multi-criteria analysis, under the condition that criteria adopted for decision-making incorporate resilience alongside other policy goals, such as sustainability.

Introduction

Faced with the deadliest pandemic of the past 100 years, many institutions around the world have been put under heavy stress to come up with meaningful policy decisions, in no time. These were not only decisions related to the direct management of the emergency, or even related to the broader area of health policy: the pandemic has forced administrations to strike a constantly evolving balance

between “[lives and livelihoods](#)”. Moreover, administrations have also faced growing dilemmas between short-term protection measures, and the more medium-term imperative of preparing and transforming the economy to increase its ability to absorb future shocks. As a matter of fact, the sparse literature available on this issue shows that some governments have so far [prioritised protective measures](#), rather than remedying the lack of preparedness that became apparent to all in the first months of the pandemic. Such short-term protective measures may have led to widely diverging impacts in the medium- to long-term, especially as the ancillary, collateral effects of the pandemic on the economy, society and individual well-being (e.g. mental health) are only now starting to become more apparent.

At first blush, it may seem justifiable that the decision-making process conceived for ordinary times went astray during a period of such emergency. However, a closer look reveals that much could have been done *before* the pandemic to ensure that policymakers were better prepared to face this unpredictable series of events. A greater degree of preparedness, not only in the health sector but in government, the economy and society as a whole, could have saved thousands, if not millions of lives. The growing emphasis on the need to “[protect, prepare and transform](#)” the economy and society is gradually reshaping the way in which we conceive of the role of public policy, leading countries to take resilience-oriented measures on several fronts, including diversifying global value chains, building excess capacity in health systems, retraining doctors and nurses, improving logistics in procuring and distributing vaccines and protective equipment, and adopting more decentralized, digitized governance when building health data spaces. This also leads to a notion of resilience that is broader than the health domain, and encompasses individual and collective well-being, as well as economic and social dimensions, as recently reflected by the Joint Research Centre of the European Commission in its [prototype Resilience Dashboard](#).

However, all these measures are likely to remain isolated and ineffective, if the decision-making process adopted by governments in both ordinary and extra-ordinary times does not take into account resilience in the formulation of policy priorities. [Emerging evidence](#) in the current pandemic confirmed that countries with greater performance in terms of government effectiveness have been able to better face the challenges of the pandemic. This requires, *i.a.* that countries mainstream resilience at each and every step of the policy cycle. This short contribution reviews five major changes that will be required in the near future.

Step 1. Strengthen the use of foresight, science advice and communication

One thing we know about the COVID-19 pandemic is that, while it was not foreseen, it could [have been predicted](#) and factored into preparatory measures. As a matter of fact, the lack of preparedness of countries like the United States had been [diagnosed](#) way before the COVID-19 pandemic, and yet [nothing was done](#) by the U.S. administration to boost investment in resilience. **Use of foresight techniques can help governments anticipate possible low-probability, high-impact events that could have a disruptive impact on the economy and society:** at the same time, simply using foresight is going to be of limited use, if governments do not convert the signals coming from foresight exercises into concrete preparatory measures. Countries that engage in regular foresight activities include [Singapore](#) and [Finland](#); the European Commission's Joint Research Centre recently released its first [strategic foresight report](#), to be used in support of policymaking. However, a global-scale foresight exercise on large-scale risks would certainly lead to better and more cost-effective results, as it would incorporate the many sources of risk emerging in a globalised, interconnected world. In this respect, the WHO could, in cooperation with other international organisations, consider launching planetary-scale simulation and foresight exercises to boost global health resilience.

However, translating the findings of foresight exercises into daily policy practice is far from straightforward, and is complicated by the fact that investing in resilience “before the event” is unlikely to be a popular decision with citizens: collective bounded rationality typically leads to “hyperbolic discounting”, or the systematic downplaying of low-probability events. This tendency, already strong in most governments, is further exacerbated by deteriorating trust in science (already before the pandemic), and also by the fact that policies are crafted and adopted in the attempt to minimize costs, and thereby often eliminate any redundancy or excess capacity in the name of efficiency (see below). Governments that speak the “less is more” language, just as businesses that pursue cost advantages in global supply chains, are unlikely to take into account resilience to a full extent.

One way to promote resilience-oriented investments would be to **strengthen science-based advice to policymakers**, both “before” and “after the event”. In many legal systems, existing bodies devoted to scientific advice have proven to be unable to help policymakers when the pandemic started to emerge. A good example is the European Commission, in which none of the existing bodies, from the [Group of Scientific Advisors](#) to [the I.D.E.A.](#) or even the [Joint Research Centre](#), let alone the ECDC, turned out to be useful in helping policymakers navigate the difficult waters of COVID-19, despite the presence of medical doctors and epidemiologists in at least some of these bodies. The President of the European Commission, Ursula von der Leyen, had to appoint a Special Advisor in order to obtain early and timely

support. Similar evidence of failure of existing science advice mechanisms is available for the [United Kingdom](#), the [United States](#), and several European countries including [Sweden](#), Italy, and France.

The difficulty in strengthening scientific advice is made even more significant by the fact that **future advisory bodies cannot be built on hindsight, but should rely (also) on foresight**. This is the case for future pandemics: the fact that this time the risk came from an infectious disease (or even more specifically, by a Coronavirus) does not mean that future disruptions will necessarily share the same origin or share the same characteristics: as a matter of fact, upcoming risks may also be man-made, and take hybrid forms (e.g., cyber-attacks coupled with bioterrorism), thereby creating even harsher response problems. The practice of horizon-scanning and risk assessment should therefore become a much more inter-disciplinary, recurrent function of government, involving experts from different fields, and a great deal of data science, simulation, and stress-testing, let alone international cooperation (see points below).

Finally, responsiveness and acceptance of public policy measures during tragic events is essential for the resilience of a legal system. More transparent government, as well as more effective and trust-enhancing science communication are [essential](#) to secure compliance with policy measures in difficult times. Accordingly, investing in more effective science communication and in fighting disinformation are key aspects of government effectiveness, and feature prominently in the list of requirements for a more resilient policy cycle.

Step 2. Stress-test policies periodically to check their resilience

The need to embed stress-testing of policies in the policy cycle, in the form of regular interim evaluations, was already felt by policymakers in the aftermath of the financial crisis of 2007-2008, and later with the Fukushima nuclear disaster in 2011. More recently, also environmental policies have started to take into account possible shocks, which should be taken into account in evaluating possible alternative courses of action for policymakers. Already in that practice, the difference between resilience (commonly interpreted as the ability of a system to bounce back to the *status quo ante*) and robustness (understood as a system's ability to thrive notwithstanding the emergence of unforeseen shocks). In the past decade, the difference between achieving enhanced "resilience" and the goal of improving the "robustness" of public policies has emerged vibrantly, leading to new thinking inside several governments, from the UK's [Futures Toolkit](#) to the US Government Accountability Office new [Center for strategic foresight](#).

However, most of these techniques were introduced in governments before the pandemic, and yet they did not exert any impact on the ability of governments to prepare for facing this event. In other words, **the practice of foresight and stress-testing has gradually become more popular inside governments**, mostly in recognition of the challenges posed by accelerating digital transformation; at the same time, **so far the use of these techniques has not led to concrete actions**. This is partly due to the fact that, in the regulatory governance world, **the marriage between the two disciplines of foresight and policy evaluation has not yet been fully celebrated** (see below, Sections 3 and 4).

Stress-testing of policies should, in the post-pandemic age, be made a key step in the ongoing monitoring and evaluation of the legislative and regulatory stock. This implies that, rather than merely evaluating the prospective impacts of new policies (or spending programmes) at the proposal stage, and performing ex post evaluation a few years down the road, governments perform interim evaluations that incorporate resilience-related questions during intermediate steps of the policy cycle. Alternatively, a more systemic approach to testing the resilience of entire policy domains of a critical nature (e.g. financial markets; the agrifood chain) could be adopted. Such an approach (which would echo the early experience of the European Commission with the so-called “fitness checks”, which however did not incorporate resilience-oriented analysis) could perhaps provide a clearer view of the robustness of entire legislative *corpora*.

As of today, **the practice of policy evaluation and regulatory oversight does not incorporate, in any country, suitable instruments for the analysis of systemic resilience**. Future research and public sector training should be oriented towards using enhanced simulation (e.g. “digital twins”; general equilibrium models) to perform resilience testing of existing rules and policies. These implies a rather new set of skills, which future policymakers will need to develop.

Step 3. Embed resilience (or the lack thereof) in the problem definition phase

The theory and practice of policy evaluation has traditionally emphasized problem definition as one of the most important phases of the **whole better regulation toolkit, and in particular the *ex ante* impact assessment phase**. **However, when governments define the problem and thereby justify legislation or regulation, they are typically constrained by the need to identify either a market failure, or a regulatory failure**. In other words, the mainstream approach to *ex ante* impact analysis does not contemplate acting to improve systemic resilience. This, coupled with the absence of foresight and stress-testing techniques, leaves policymakers practically without arguments backing any proactive

legislative proposal aimed at remedying a lack of resilience observed in the system, or in a specific part thereof.

Addressing this problem requires that national better regulation guidelines (as well as international guidance, for example by the OECD) recommend that governments contemplate acting to address a resilience-related problem. Importantly, resilience-related problems will often clash with the overarching criterion currently used to decide on the desirability of a given public policy, *i.e.* economic efficiency in the sense of the maximization of net benefits (see next step). For example, in some circumstances maintaining a degree of excess capacity in the health system, or a redundancy in a critical infrastructure, would be a defeating choice compared to cheaper choices that feature lower levels of resilience. Accordingly, even those few policymakers that try to incorporate the analysis of resilience in early foresight or stress-testing exercises would have to stop at Step 3. If they do not stop, regulatory oversight bodies in charge of scrutinising new regulatory proposals will stop them anyway, especially when they are particularly focused on simplification or the reduction of regulatory costs, which is often the case in both OECD and non-OECD countries. The battle for resilience-oriented public policy can become even more frustrating in the presence of badly designed [“regulatory offsetting” mechanisms](#), or regulatory budgeting, especially since these mechanisms oblige administrations to identify one or more regulatory provisions to repeal or drastically simplify, whenever they want to propose new regulation. Such an approach, [unless carefully designed](#), can encourage governments to slim down the regulatory stock to the essential, potentially removing resilience-enhancing provisions. As the European Commission recently [announced](#) that it will start adopting regulatory offsetting (“one in one out”), as well as foresight, the compatibility of such an approach with a resilience-oriented mindset will be put to the test.

Relatedly, in the evaluation of spending programmes and public investments, governments should incorporate resilience-related criteria. After years in which liberalisation efforts in network industries and other critical infrastructure have prioritised economic efficiency over resilience, new large-scale investment programmes launched as *stimuli* to the economy (e.g. in the United States, but also in the European Union) will have to select projects on the basis of a more refined set of evaluation criteria. The same should happen, to the extent possible, when selecting priorities for assistance and cooperation with developing countries, where the logic of “ease of doing business” has so far dominated the scene, providing priorities for efficiency-oriented reforms, with very limited attention for resilience.

Step 4. Mainstream resilience in multi-criteria analysis of policy and spending initiatives

Over the past four decades (in particular, since the Reagan Administration first introduced the tool in 1981), Regulatory Impact Analysis has been tied to the use of cost-benefit analysis (CBA) as the key tool for selecting and prioritising public policies. At the international level, the OECD, the World Bank, the IMF recommend using CBA as a suitable tool to orient public policy decisions. This practice consists in monetising benefits and costs, and choosing the policy alternative that presents the highest net present value, i.e. the highest benefit, net of costs, discounted to today's value.

CBA, at least in its traditional form, is in many respects incompatible with the objective of resilience, for many reasons. First, difficulties in translating risk into monetary values often leads to an under-representation of risk in CBA frameworks. This is also due to the fact that many governments use rather high discount rates when looking at possible future risks, which results into rather residual weight of potential lacks of resilience in the overall decision-making. Second, CBA largely ignores distributional impacts, which places policymakers in a position of virtual indifference between solutions that enhance resilience by catering for all potential systemic weaknesses, and solutions that focus on concentrating benefits in the hands of the few. Here, the concept of systemic (rather than merely health-related) resilience is essential: for example, ensuring that all communities have access to a robust infrastructure may be seen as a resilience-enhancing option, but may still lose in a CBA when compared to options that concentrate on maximising the value for money of new investment. Similarly, prioritising access to high quality education to all is seen as enhancing the ability of the whole of society to absorb future shocks, as the workforce can quickly reorient itself towards new occupations that are needed to face the pandemic. The reskilling and upskilling of workers in the aftermath of the COVID-19 pandemic will be one of the most urgent priorities, as nearly half of the workforce is at risk of losing its livelihood according to the ILO. Against this backdrop, past education policies appear to have regularly downplayed the importance of ensuring that skills provided in education are sufficiently broad and fungible, and are constantly upgraded.

Several other reasons stand between the use of CBA and the objective of resilience, including methodological individualism, as well as the equation of income with well-being. More generally, the use of CBA is incompatible with resilience since it is fundamentally a "bottom-up" exercise, in which benefits from public policies can only be justified as such when they are expressed, either implicitly or explicitly, in terms of the willingness to pay of citizens for impacts caused by policy reform.

More generally, **the bottom-up nature of contemporary policy evaluation is, by design, incompatible with long-term objectives such as ensuring systemic resilience. A more suitable tool in this respect**

would be the adoption of multi-criteria analysis for the scrutiny of policy options, under the condition that criteria adopted for decision-making incorporate resilience alongside other policy goals, such as sustainability. Currently, a few governments around the world are in the process of mainstreaming the SDGs in the better regulation agenda. European countries like [Denmark](#) recently announced their intention to shift to this rather different paradigm in their better regulation tools, and the European Commission is expected to release a communication announcing this shift during the Spring of 2021. That said, the focus on the SDGs would already go a long way towards incorporating distributional impacts and even some elements of resilience into the analysis: still, increasing the salience of resilience-related indicators in multi-criteria analysis would make a difference in the way public policies are adopted in the future.

In the short term, perhaps the most important change needed is the incorporation of resilience-oriented criteria in the evaluation of spending programmes. Some [attempts](#) were made in the past to merge CBA (or, for spending programmes, most often cost-effectiveness analysis, CEA) in the [evaluation of infrastructure investment](#). But a systematic application of resilience-oriented criteria requires a much bigger effort.

Step 5. Consider resilience in the selection and analysis of policy alternatives

One lesson learnt from the first year of pandemic is that **decentralised, redundant governance models appear to be more able to absorb shocks than more centralised ones.** A good example is the Internet architecture, especially in its physical layer: the “network of networks” could weather the storm by seamlessly adapting to a dramatic surge in traffic. Similarly, value chains with higher degree of digitisation and decentralisation seem to have proven more resilient than centralised models. At the same time, extremely centralised, digitised, efficiency-oriented business models such as those of digital labour platforms have experienced disruptions, and most importantly have led to systemic weaknesses in terms of workers’ protection, as [recently denounced by the ILO](#).

Observing the different resilience characteristics of alternative modes of governance is not common in the daily practice of policymakers. However, shifting towards a more resilience-oriented approach makes the consideration of alternative (more decentralised) governance options more compelling. For example, in considering options for the digitisation of strategic value chains, or in shaping data governance at the sectoral level, governments may want to consider allocating rights and entitlements over value and data in a way that empowers local producers and individual communities, following evidence that control over resources and the ability to adapt organisational arrangements for the

provision of community-wide services are key features of resilient communities even when they lack significant resources. Likewise, excessive centralisation of decisionmaking and resources in health systems has reportedly negatively affected resilience in several countries, including the UK where regional health institutions have been significantly weakened over the years.

Centres of governments, and in particular oversight bodies in charge of providing guidance to policymakers, are therefore called to develop stronger knowledge on modes of governance that are likely to positively affect resilience over time. If such information is included in better regulation guidelines around the world, policymakers (often merely affected by “availability bias”) will be nudged towards considering those options more frequently.

Conclusion: towards a renewed policy cycle

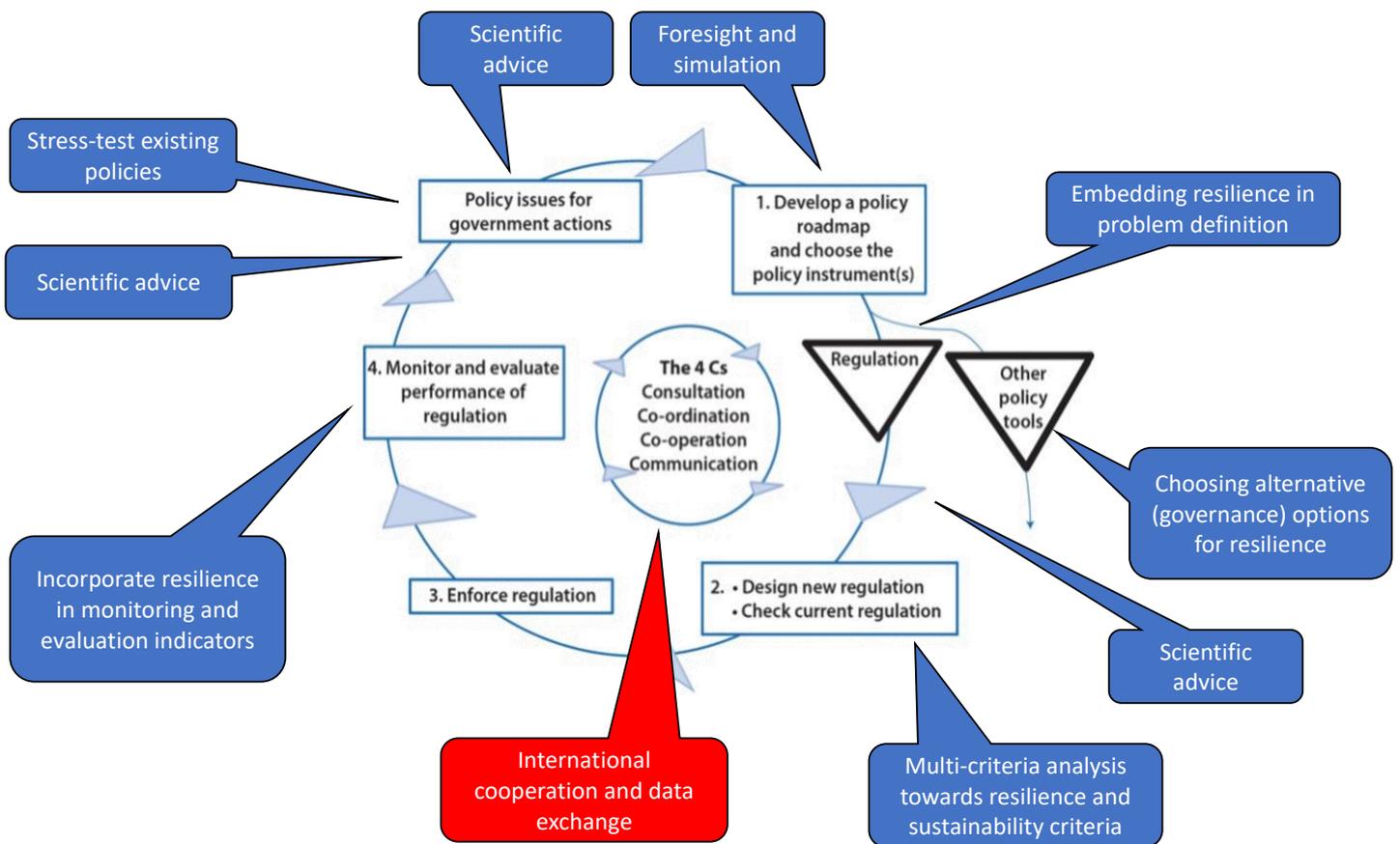
Mainstreaming resilience in the policy cycle requires a number of significant changes in the way public policy and government spending are currently approached in many countries. Such changes are an essential contribution to the broader goal of making nations more able to absorb shocks and even use crises as opportunities to thrive under uncertainty. Among them, the most disruptive change is the paradigm shift from methods and approaches oriented towards efficiency and mechanically reflecting the preferences of citizens, towards an outcome-oriented approach that can be made compatible with the broader goal of moving towards sustainability and well-being as the “North Stars” of policymakers in the current decade.

The figure below summarises the way in which the five steps described above would contribute to the policy cycle, using the traditional view of the regulatory governance cycle adopted by the OECD. Needless to say, the introduction of these tools requires resources, competences, and a whole-of-government approach in which regulatory oversight becomes much more than the central coordination of red tape reduction. At the same time, additional reforms will be needed to pursue resilience in the post-pandemic age: these include *inter alia* the digital transformation of healthcare as well as of government, in a way that preserves interoperability between national systems, thereby enabling global-scale risk detection and timely response. Many of these reforms will initially have to cope with very tight government budgets in many countries, and will have to feature prominently both in inward-looking domestic reform by developed countries, and in the provision of assistance to developing countries.

Finally, this short contribution also highlighted that the notion of “health resilience” is unlikely to be sufficient in the post-pandemic period: broader social, economic and health considerations should

feature in the pursuit of resilience, if one wants to avoid that the benefits of a resilient healthcare system are frustrated by disruptions in other parts of the economy and society. This is also supported by emerging [literature](#) on the weak explanatory power of health-focused indicators such as the Global Health Security Index when looking at how countries managed to respond to the pandemic. This is even truer if one assumes that a resilient healthcare system is not going to eliminate all future risks, but will at least prevent unnecessary deaths and mitigate the impacts of future pandemics and epidemics.

Figure 1. A resilience-enhancing regulatory governance cycle



Source. Author's elaboration on [OECD \(2011\)](#)