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Six Policy Ideas for Coping with the COVID-19 Pandemic

March 24, 2020

Summary: This white paper contains six policy ideas that may help countries in coping with the COVID-19 pandemic. The paper focuses on policies that can slow down the spread of the disease, better protect high-risk groups and leverage that a large part of the labor force is idle. For each policy idea, we describe the problem it is meant to solve, what may be leveraged to solve it, and a brief analysis of benefits and risks.

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Introduction

Content and purpose: This white paper contains six policy ideas that could help in coping with the COVID-19 pandemic and a brief analysis of the benefits and risks of each policy idea. The paper serves the twofold purpose of 1) providing a source of ideas for policy-makers and 2) to initiate an academic discussion of policies to cope with the COVID-19 pandemic.

Methods: The creation of this document was done under a great sense of urgency and time pressure. The first step was to identify some specific problems associated with the COVID-19 pandemic. The second step consisted of an open discussion of how the problems could be solved, generating a large number of ideas. In the third step, we critically assessed the ideas, their benefits and their risks, thus also filtering out some of the ideas.

Contribution: In this report, we present six policy ideas for handling the COVID-19 pandemic. The policy ideas are mainly micro-level in nature, by which we simply mean that they are about how individuals and organizations can respond to the crisis. The proposals can be read individually, and are not intended to add up to a program. The policy ideas address how to control and slow down the spread (Ideas 1, 4 and 5), how to protect and identify high-risk groups (Ideas 2 and 3), and how to leverage that a large part of the labor force is idle (Idea 6).

Caveats and weaknesses: This document is the product of a very fast analysis done over the course of three days. It is not a scientific paper and it has not gone through peer-review. The policy ideas and analysis reflect our research background as economists. We emphasize that these are ideas and not recommendations. We do not present evidence for the success or failure of a particular idea and we do not review the literature. We do not claim novelty of any idea. Indeed, some are already part of an active debate, and by the time this is published or is read, some ideas may be outdated. Before implementation they need further scrutiny by, not least, experts in medicine and immunology and possibly other research fields. The totality of the ideas is not meant as a full-fledged strategy. Indeed, given how much the overall strategy seems to differ between countries – some aiming to fully contain the virus while others just want to mitigate the spread – some ideas would be counterproductive in some countries. They may also be specific to particular institutional settings. We give some examples applied to Sweden, though we think most policy ideas can be applied in other countries.

IDEA 1: Strategy for ramping up testing resources

Problem: In many countries, current measures against the spread of the virus have a very low precision, leading to an unnecessarily high cost to society.

Leverage point: Better information on whether individuals or locations have disease allows for a much more targeted approach to mitigation. The costs associated with increased testing is likely to be dwarfed by the costs of reduced economic activity due to the spread of COVID-19.

Idea: Dramatic increases in the testing capability of the state, both in terms of equipment and personnel, which is in line with the current advice from WHO.¹ Our suggestion is to directly bring business executives into government service. This would allow the government to leverage their sector-specific knowledge and networks in coordinating the private sector. They would also get access to the private sector's advantage in rapidly scaling up production processes and organizational structures.

One concrete way for the government to organize test production would be to start a state-run enterprise with adequate resources to support the private sector in test development. The idea would be that the company would commit to buy millions of tests at good prices, and use the resources of the central government to support companies with expenses that are needed for them to overcome bottlenecks and procure the necessary supplies.

The company could preferably be led by business executives with experience in rapidly developing new products and scaling up processes. The government would allow for a relatively flexible approach for the company in reaching its goal, and would provide the necessary financing.

Upside: Testing provides for multiple avenues that allows us to reduce the severity of other measures needed to keep the contagion in check:

- a) If people can get tested when they have mild symptoms, we can keep people at work if they test negatively, which releases some part of the workforce.
- b) More testing is likely to increase the share of quarantine orders that are obeyed, since people will take orders more seriously if they have been tested positively.
- c) If testing becomes very widely available, quarantines can be targeted using contact tracing. Essentially, if someone gets sick and tests positively, we can quickly do a test of all they have interacted with. All who test positive can be quarantined and the rest go back to work.

¹ See, e.g., <https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---16-march-2020>

Again, more large-scale testing means that the number of people that can go to work while keeping spread under control is much larger.

- d) With more testing, we could do continuous updating of the spread in different parts of a country using representative testing. By doing target randomized tests in certain areas, we can make shutdowns more targeted to hotspots, and institute travel restrictions from areas that have extensive spread. Again, this can save many areas from unnecessary shutdowns.
- e) While all agree that more tests are better than fewer tests, it is important to stress that the gains from testing are likely to be *orders of magnitude* larger than the costs of testing. For example, if more extensive testing can save 1% of GDP, in Sweden that corresponds to 50 billion SEK which is roughly 50 million tests at 100 dollar each.

Risks and Challenges: The benefits of mass testing are clear. The main challenges are organizational and logistical. Rolling out mass testing means that the government rapidly has to procure an enormous amount of material, and ensure that a large workforce is available to operate that material. Hence, an ambition to do mass testing has to be coupled with an investment in the organizational capacities to make it happen (see suggestion on state-run enterprise above). A risk with the specific suggestion made here is that the incentives of the organizations providing the tests and the government may not necessarily align. Furthermore, state-run enterprises are sometimes less efficient than private firms.² There is also a risk of corruption, in particular when new organizational and market forms are created quickly and when there is large funding involved. Substantial oversight may be needed.

² See, e.g., <https://link.springer.com/article/10.1007/s00181-010-0349-8> and <https://link.springer.com/article/10.1007/s11127-008-9309-7> some empirics and discussion.

IDEA 2: Strategies for protecting high-risk groups

Problem: Protecting high-risk groups from being exposed to the virus is paramount for reducing the death toll of COVID-19 as well as the pressure on the health care system.³ Assuming the government stops short of enforcing a curfew, what policies can be undertaken to encourage people in high-risk groups to self-isolate in their homes? How can we reduce the mental cost of such isolation? And how can we reduce the risk of high-risk groups receiving the virus from the social contacts that take place anyhow?

Leverage point: While we believe it is important that the relevant authorities send a strong message to people in high-risk groups that it is in their *own interest* to self-isolate, we also think it is important that authorities indicate that it is in the *interest of the entire society* that they self-isolate. This type of information campaign must be complemented with actions that reduce the interaction between persons in high-risk groups and the rest of the society. It is also crucial that relevant authorities make a serious attempt to reach out to citizens and local communities and ask them to help out in any way possible to ease the situation for self-isolated persons in high-risk groups [see also Idea 5]. It is essential that the government provides adequate funding for all implemented policies.

Idea: We put forth four policies:

- a) a coordinated information campaign from relevant authorities explaining the rationale for self-isolation of high-risk groups combined with a plea to citizens not in high-risk groups to help ease the life of high-risk groups while in self-isolation;
- b) the closing of restaurants, museums, public swimming pools, etc. in order to reduce the incentive for high-risk groups to break self-isolation and reduce the spread of COVID-19 in general;
- c) the ramping up testing of COVID-19 among people in contact with the elderly to reduce the risk associated with contacts that are unavoidable, or only avoidable at a high cost;
- d) government grants directed toward expanding the personnel force in home care.

We now turn to a more detailed discussion of each policy.

The main purpose of (a) is to make persons in high-risk groups understand why they need to self-isolate. We envision a public campaign in TV, radio and newspapers complemented by an easy-to-understand information package sent out to all households. If implemented in Sweden,

³ This includes people who are above 70 years of age; those who suffer from long-term medical conditions (heart disease, lung disease, diabetes, cancer or high blood pressure, etc.), and those with weak immune systems.

both the campaign and the information packages should provide information in Swedish, English and the languages spoken by large immigrant groups. The information package should also be available in formats that allow people with hearing problems and vision loss to take part of the material. This information package should, among other things, contain scientific arguments why it is in the interest of people from high-risk groups to self-isolate. For example, recent evidence from Italy suggests that more than 99 percent of all persons that have died as a consequence of COVID-19 belong to high-risk groups. Yet we also believe it is paramount that the campaign does not only focus on self-interest. Many people underestimate their own vulnerability, and so are not persuaded by arguments only appealing to their own safety. We therefore believe the campaign should also emphasize why self-isolation is an act of solidarity as it reduces the pressure on an already overburdened health care system and reduces the pace of the spread of the virus. People need to understand that there is an imminent risk of the health care system collapsing without self-isolation of high-risk groups. To make this point, hard facts might be complemented with more emotionally charged material, for instance interviews with Italian doctors describing the situation they currently face.

While the necessity of self-isolation is the core message, we also think the campaign should emphasize what people who do not belong to risk-groups can do for those in isolation. It is well-documented that social isolation among the elderly is a serious public health issue with heightened risk of cardiovascular, autoimmune, neurocognitive, and mental health problems⁴. To reduce the negative effects of isolation, we believe the campaign should encourage people to reach out (via phone, physical letters or internet-based communication tools) to self-isolated in their social networks and offer their company and help with errands, such as grocery store shopping. Individuals and local businesses should also be encouraged to take initiatives to support self-isolated who lack an adequate social network, for instance by organizing help to run basic errands. Such help could be coordinated in local Facebook groups or neighborhood communities [see also Idea 5] and would be a desirable complement to expanded home care services (see d) below). Local businesses could be encouraged to have dedicated opening hours for persons in high-risk groups. (Even if many of these initiatives will be based on voluntary and unpaid labor, the government could provide necessary funding to secure the long run sustainability of these types of incentives).

Finally, we believe a campaign as described above offers a good opportunity to reinforce the importance of basic hygiene and to stay home while sick for reducing the pace of spread of the virus.

b) While we believe a plea for self-isolation is effective, reducing the incentive to break self-isolation may also be important. A simple but drastic way of doing so is to restrict the set of options for meeting people indoors by shutting down bars, libraries, restaurants, cafés, cinemas, museums, public swimming pools, gyms and hairdressers (many countries have already implemented such policies Sweden has so far abstained from it). Closing down such facilities will also make the plea (in Sweden) that upper secondary schools and universities go over to

⁴ [https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667\(20\)30061-X/fulltext](https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667(20)30061-X/fulltext)

providing education online more effective (as students will be less likely to meet up in larger groups) and will likely reduce the pace at which COVID-19 spreads in society. Because no policy of self-isolation which stops short of draconian measures can be fully effective, reducing the spread of COVID-19 in society at large is also key to protecting high-risk groups.

c) We believe it is important to recognize that complete isolation of high-risk groups is neither possible nor desirable. Elderly at nursery homes will still have to be taken care of; home care visits still have to take place, appointments with health care providers cannot be postponed indefinitely, etc. We therefore believe a policy of self-isolation should be complemented with policies aimed at reducing the risk of high-risk groups contracting the virus from the inevitable social contacts in their daily lives. This is one reason we advocate measures that reduce the spread of COVID-19 in society as a whole (see b) above). But we also believe there is scope for ramping up testing of people in occupations likely to be in contact with high-risk groups, in particular the elderly. In addition to obvious occupational groups such as health care workers (which are already being tested), we argue it would be worthwhile to expand testing to personnel in nursery homes, home care, grocery stores, pharmacists, transportation services, etc. Relatedly, it might be called for to adopt stricter standards for hygiene (and make sure existing standards are enforced) by, for instance, more prevalent use of face masks and hand rub. We also believe it is important to limit rotation of personnel in elderly care and home care so as to reduce the set of people each individual in high-risk groups are in contact with (see Idea 4).

d) Requiring the elderly to stay home is likely to increase their need for assistance. This could include everyday errands, like going to the grocery store, but also help to meet friends outdoors (where the risk of being exposed to COVID-19 is presumably smaller). Reducing rotation among staff in nursery homes and home care (as suggested in c) above) will likely also require expanding the personnel force. To this end, the government could provide grants that help municipalities temporarily expand home care services. Due to the large number of expected layoffs, the factual economic cost of such grants will presumably be much smaller than the nominal cost.

Upside: If the suggested actions are effective, fewer people in high-risk groups will be infected, thereby both reducing the number of deaths and helping to sustain the capacity of the health care system. If successful, the measures suggested above may also help reduce stress and anxiety among elderly who were lonely prior to the outbreak of COVID-19.

Risks and challenges: The effectiveness of each policy suggested above is uncertain. Because of this - and the inherent complementarity between them - we believe it is important not to put faith in a single policy. Yet even if the policies prove to be effective in reaching their aim, they are not without costs. We are particularly concerned that elderly may suffer from mental health problems and lower life satisfaction when they are no longer allowed to follow daily routines, like going swimming. These risks are arguably larger for those who live alone and had little contact with their relatives already before COVID-19. We therefore think it is important to continuously survey a subsample of the elderly to better understand what restrictions they

perceive as particularly harmful to their well-being. We also believe it is important to recognize the substantial cost brought upon owners and workers of businesses which are ordered to shut down in case our suggestion b) were implemented. To mitigate these costs, the state could compensate owners of such businesses (the compensation could for instance be based on last year's turnover for each business) and direct assistance toward displaced workers.

IDEA 3: Profiling of deceased and intensive-care patients

Problems: 1) There is substantial uncertainty about the costs of letting the virus spread and how many people can be expected to die and/or need intensive care. 2) Many policies are focused on protecting large groups, which is potentially costly and inefficient.

Leverage point: Abundance of data (in some countries).

Idea: Use individual-level data to statistically analyze the profile of those who have been in intensive care or deceased. Such analyses could focus on health behaviors (e.g., smoking), medical history, professional background, type of residence etc. Once statistically significant attributes are found, policies to combat the spread of COVID-19 can be made contingent on these. Examples include who to put in quarantine and who should be tested on a more frequent basis.

Upside: A better understanding of who develops severe COVID-19 symptoms could potentially increase the efficiency of many policies. It would also allow for a better understanding of to what extent the experience of a particular experience country (that has been subject to the spread for longer) is of relevance for other countries. For example, if smoking is a major risk factor for developing severe symptoms, then COVID-19 is presumably less serious for countries where smoking is less prevalent.

Risks and challenges: If not done carefully, targeting can be inefficient and misdirected. For example, one has to take into account that also infections may not be random and that causality is not obvious.

IDEA 4: Increased inefficiency in some sectors

Problem: Efficient provision of public services often imply a small social distance between people, thereby contributing to the spread of COVID-19.

Leverage point: Governments need to stimulate the economy and there will most likely soon be an abundance of displaced workers who could provide labor.

Idea: Accept lower efficiency in service provision when this helps increase the social distance or in other ways reduce the spread of COVID-19. We present two examples below:

- a) As many people stay home many companies (private and public) reduce the frequency in their train and bus schedules. To the extent possible, the opposite should be done: keep a high frequency of public transport. This will ensure that the buses and trains are empty which enables social distancing.
- b) In nursery homes and home care, organize schedules so that each elderly person is not taken care of by many different workers.

Upside: a) Less spread of virus. Economic stimulus and usage of workforce. The vehicles are there anyway. b) The risk of a super spreader is reduced. Stimulated economy by increasing demand for home care workers.

Risks and challenges: The policies suggested above are not without costs. Regarding a) it is still costly to have trains and buses run at low capacity due to capital depreciation (wear and tear of equipment), and lack of personnel may imply capacity constraints are hit. Regarding b), quickly expanding the workforce (which might be required when schedules are less flexible) may have a negative effect on quality.

IDEA 5: Matching mechanisms for solving coordination problems

Problem: The COVID-19 outbreak will cause a number of coordination problems. For example, citizens and local communities must be encouraged to take initiatives to support persons in quarantine, e.g., by coordinating and organizing help with home deliveries from grocery stores and pharmacies (see Idea 2). Another example is how to coordinate and distribute deliveries of medical supplies among regions in situations when resources are scarce. A third example is how to coordinate a temporary relocation of dismissed workers to industries, firms, stores, etc. that have experienced increased demand due to the COVID-19 outbreak (e.g., grocery stores, e-commerce, companies in the health industry, etc.). It is well-known that coordination failures are costly and lead to inefficiencies.

Idea: The above types of coordination problems can be regarded as matching problems. Researchers around the world have in the last decade solved many important and welfare improving matching problems including, for example, the kidney exchange problem, the refugee resettlement problem, and the school choice problem.⁵ By viewing the above type of coordination problems as matching problems, it is possible to develop computer software where agents (firms, private persons, etc.) can register their needs and requests (service requests, demand for labour, etc.) and where customized algorithms solve the matching problems of interest.

Given the large variety of real-world problems to which matching algorithms have already been successfully applied, there is little reason to believe that many of the existing techniques cannot be used to solve various coordination problems related to the COVID-19 outbreak. Previous experiences also show that organizing matching markets is a cost-efficient and efficiency-improving way to coordinate exchanges, trades, pairings, etc.

To organize a matching market, application-specific computer software needs to be developed. This development must be funded by the government. The government should also reach out to relevant tech-teams and persons with a large experience of building matching software/markets (both within and outside of academia).

Upside: Matching algorithms offer a cost-efficient and efficiency-improving way to coordinate various exchanges, trades, pairings, etc., that already has been proved to be successful in many other applications. For applications that target self-isolated persons in high-risk groups, it will also be easier for relatives and friends to support quarantined persons even if they don't live in the same geographical area (e.g., by trading exchanges or by helping relatives to register their needs in the matching software).

⁵ <https://www.aeaweb.org/articles?id=10.1257/aer.108.7.1609>

Risks and challenges: The software may not be used, i.e., even if the market is potentially thick, the demand for the software may be low. It is, consequently, important that the software has a user-friendly interface and that the general public is informed about its existence. It is also crucial that the software development starts within days (otherwise it may be too late).

IDEA 6: Activating the displaced workforce

Problem: The economic crisis brought about by COVID-19 can be expected to drive a large share of the workforce out of employment or out of their businesses. Without gainful employment, the human capital of displaced workers will depreciate, potentially reducing their long-term prospects on the labor market. Even if these individuals are supported financially through unemployment insurance (UI) or welfare payments, there is a risk for increased social problems (e.g. anti-social behavior, psychosocial stress, and destructive coping strategies).⁶ These individuals therefore need to fill their time with something valuable and constructive.

Leverage point: The opportunity cost of time for the unemployed is low, especially if normal recreational activities have been closed down in an attempt to reduce the spread of COVID-19. Still, individuals want to occupy themselves with something meaningful, and can easily be incentivized if the government tops up UI and welfare payments

Idea: In a recession when the opportunity cost of time is low, the displaced workforce can (a) provide services that normally are not worth providing, and (b) can invest in various types of human capital.

Provision of services

Many services that provide a long-run benefit to society, but which are normally too expensive to be carried out, could be provided in a recession. Moreover, the spread of COVID-19 creates a need for new types of services. These services are often, but not necessarily, low-skill tasks. Much can thus be gained if society could make use of the labor services potentially provided by displaced individuals.

Services that provide long-run benefits but are only worth carrying out in a recession include digitization of archives; inventory of historical sites; nature conservation work; repairing schools and public facilities etc. Many such activities can be done either outdoors or while in quarantine thus constituting a low risk for the spread of COVID-19.

Welfare services that are important in a contagion include delivering food and support for the elderly and other risk groups in self-quarantine; providing disinfection and sanitation of public spaces; cleaning schools; aiding in test taking etc.

Short-run educational opportunities

There are many educational providers that are currently transferring their technologies to e-learning and distance education as a response to COVID-19. The provision of education can

⁶ See for example:

<https://journals.sagepub.com/doi/abs/10.1177/0019793915586381>;

<https://www.sciencedirect.com/science/article/abs/pii/S0277953609000380?via%3Dihub>;

<https://www.sciencedirect.com/science/article/abs/pii/S0167629609000964>

be scaled up at relatively low cost; for example, a teacher can lecture to 200 students rather than 50 students. Introductory courses at universities could therefore be opened up to free access, or free admission, for displaced individuals. High-school level adult education can similarly be expanded to provide basic high school competence to work displaced individuals lacking a high school degree.

Study associations provide short term educational activities on various topics, and to the extent that they also transform their activities to e-learning, their courses can be expanded and provided to work displaced individuals.

Medium-run investments in human capital

As the skill requirement in the labor market is evolving, the COVID-19 economic crisis creates an opportunity to speed up structural adjustment by educating and providing displaced individuals with skills that will be valuable on the labor market when the economy recovers. By taking advantage of e-learning and distance education technology displaced individuals can get access to advanced high school education, advanced vocational high school education, and university courses off location.

Today there is excess demand for labor in some welfare occupations with occupational licenses; specifically teachers, preschool teachers, nurses, assistant nurses, and police officers. The COVID-19 economic crisis creates an opportunity to train individuals for these welfare occupations (and to validate skills for individuals with an older training). The theoretical part of the education can be provided through e-learning and distance education technology, whereas more practically oriented parts can either be postponed or provided through alternative controlled venues.

Upside: Services that are normally too expensive to provide can be produced, in particular low-skilled tasks necessary to constrain the spread of COVID-19. Some of the activities can be performed by high-risk groups while allowing for minimal physical contact. It is also relatively cheap to provide training in recessions for individuals who are otherwise unemployed. Training can provide skills that will be in demand when the economy recovers. Individuals who become laid off can find a meaningful activity, which reduces the risk of social problems connected to unemployment.

Risks and challenges: Individuals may be dissatisfied with carrying out low-skill tasks that are normally not provided on the labor market. Services provided by laid-off individuals may interfere with procurement regulations. As for provision of education, there can be a lock-in effect if there is a fast bounce back of the economy. Moreover, it can be difficult to forecast which skills will be in demand on the labor market in the future, especially if the recession provides a substantial amount of structural adjustment to the economy. In the training of welfare professionals there is also a risk that the public finances in the future will not allow the public sector to employ these new teachers, preschool teachers, nurses, assistant nurses, and police officers. If additional students at universities and high schools should be given course grades,

then teachers must test skills, administer exams, and host smaller seminars. This is resource intense, and will increase workload of university and high school teachers.