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Covid-19: The ideas behind the German government's agenda

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A document reveals the analysis behind Berlin's reaction to the Covid19 crisis and shows that the German government wants to avoid an economic and social "melt-down" in the neighboring countries. Common European bonds and Italy are clearly mentioned.

Europe's dialogue is deeply distressed by prejudices and false suppositions about single countries' bad intentions. In the Italian political discourse, Germany is often exposed to allegations concerning her desire to dominate other countries. In order to ascertain the kind of analysis that is currently leading the German government's action, in the following pages I will summarize a private document by the German Interior Ministry concerning the Covid19 crisis. The document exposes a finding by a group of academics and social researchers to whom the German government assigned in March the mandate of describing the challenge caused by the Covid19 crisis and providing some orientation. The document was delivered at the end of March to the Interior Ministry and is currently being used as an orientation for the initiatives that the Government needs to adopt with the aim of containing the health emergency and relaunching the German economy.

I will not comment on the content of the document. I just think that highlighting some aspects can help the European reader, the Italian one in particular, to grasp how the technical-political analysis is critical – maybe surpassed only by the legal-constitutional considerations – for political decision-making in Germany.

- *The German Government admits an initial underestimation of the crisis, which was corrected only once the infection plagued Italy, touching an emotional tone in the German citizenship.*
- *A technical independent body was summoned to forecast scenarios and deliver orientations to the executive power.*
- *The different scenarios for the spread of the infection were immediately connected with specific economic consequences.*
- *Dramatic scenarios were openly discussed. In the worst case, 1,2 million Germans were expected to die. In the worst economic scenario, German GDP would have been cut by one third and the country could have plunged into anarchy.*
- *A sociological-psychological profiling was added to suggest to the Government how to communicate, without mincing words, the risk of a hecatomb.*
- *New instruments, such as common bonds, are suggested for funding the European recovery*
- *Italy is identified as the country that will need to be aided.*

As for the last two points, one further general consideration needs to be highlighted. No concern about German dominance emerges. The concern for Germany's European partners is clearly expressed: no neighboring country should "melt down". Germany needs to provide leadership more through industrial and technical supply than through political assertiveness.

One more methodological point: I have shortened the translated version and highlighted only a few relevant phrases. Overall, I found the document a valuable and encouraging sign of democratic maturity in the middle of Europe, deserving equally mature responses from other countries, Italy included.

The following is a translation of the German document.

How to get COVID-19 under control

1. Current situation and strategy

The pandemic COVID-19 virus is the greatest challenge for politics, society and business in Germany and Europe since the end of the Second World War. A look at the data from Asia and the reports from neighboring European countries show that underestimating the magnitude of this challenge will lead to immense, irreversible damage.

Most virologists, epidemiologists, doctors, economists and political scientists answer the question “what happens if nothing is done” with a worst-case scenario of over a million deaths in 2020 - for Germany alone. A team of experts from RKI, RWI, IW, SWP, Bonn University / University of Nottingham Ningbo China, University of Lausanne and Kassel University confirms these figures with an overall model developed for Germany.

Avoiding this worst case is therefore a top strategic priority and, according to the calculations and recommendations of this team of experts, is not only absolutely necessary, but is still possible.

What should we do?

- 1) Communication: The worst case with all its consequences for the population in Germany is to be made clear, in a determined and transparent way.
- 2) Unity: Avoiding the worst case is to be defined as a central political and social goal. Politicians and citizens have to act as one.
- 3) Traceability: The citizens must be able to understand that the following measures can and must only be implemented with their help for their own good.
 - a. Social contact is to be reduced to a minimum for a certain period of time (social distancing) and an end to these measures is dependent on the fact that the public understands the impact of these measures.
 - b. The best way to make the measures work is to extend testing to all citizens in real time. Suspected citizens and the entire circle of contacts of positively tested citizens should be tested consistently. Large-scale testing gives the citizens affected by exit restrictions a clear sense that the State is actively responding to the crisis. We have to switch from the «We test to confirm the situation» method to the «We test to prevent the situation» method (South Korea is impressively demonstrating this). A central recording of all tests carried out and those that will take place in the future is essential. A determination of the national test capacity (capacity of tests, medical personnel for implementation, evaluation) and its greatest possible increase are overdue. This permits the levels of spread and containment of the virus to be shared with all citizens. This enables a step-by-step intervention in economic and social

processes that is appropriate to the situation and increases the acceptance and meaningfulness of the measures restricting freedom.

c. Even if the epidemic is successfully contained, the capacity for the necessary medical care must be increased. The situation will get so much worse, that health supply will be overstrained not only in the intensive medical care units for the very seriously ill requiring ventilators but even for less grave patients, either outpatients or inpatients, who require oxygen supply (as evidenced by China).

d. The federal government must start a comprehensive mobilization campaign. The current crisis caused by COVID-19 is a hard blow to confidence in the institutions. This has to be counteracted because the government has to become a mobilizing factor. Motto: "We are facing something very threatening, but we have recognized the danger and have decided and acted accordingly. We need all forces in society to come together and work. Then we will avert the danger ». To mobilize social perseverance, the "hiding the word" case is not an option. Anyone who wants to avert danger must know it.

2. Model calculation for strategy determination

The main reason why the great danger posed by COVID-19 has not been seen until recently is the difficulty in intuitively understanding the exponential growth. Modeling should help to understand the dynamics of COVID-19. To do this, we need to know, among other things, the rate of spread and the mortality rate of the virus. Since the beginning of the outbreak in Wuhan (China), the mortality rate of the virus has been repeatedly downplayed with the indication of a possible "undisclosed number". Asymptomatic and mild cases had hardly been tested and would therefore reduce the actual mortality rate even more if one included these unknown cases. This and other arguments have long underestimated the risk posed by the virus. It was only the dramatic situation in Italy that led to a rethink in some cases, although unfortunately all the indicators show that the peak of new infections is far from being reached there. If unsuccessful containment measures are taken, the situation there is likely to worsen by more than a factor of ten in terms of the number of cases and deaths, even in the regions that are already hardest hit.

The best way to estimate the mortality rate is to use data from South Korea. There, the various outbreaks were successfully brought under control with minimal exit restrictions, especially through efficient testing and isolation. This would not have been possible if the number of cases not found was significant. There was never a call for self-isolation in the case of mild symptoms, which would not have brought much in the flu season and for a virus that was very contagious. The systematic search for contacts also tested a large number of people who had no symptoms at all. A very small number of unreported cases can therefore be expected in South Korea. The mortality rates per age group can therefore be regarded as a good reference, which can easily be increased, since deaths are still regularly reported, although few new cases are added. These numbers are also consistent with the numbers from China outside of Hubei, where testing has been much more intensive. For the distribution of cases among the various age groups and the age pyramid in South Korea, an average case mortality rate of currently 1.1% is obtained. Adjusted to the age structure for Europe, we deduct an average case mortality rate of 1.8% under the best hospital care. The data from South Korea should therefore be viewed as minimum values for the final mortality rate after an outbreak has subsided and all infected people are cured or dead. During the exponential diffusion of the virus one can assume a preliminary

mortality rate of around 1%. In a very moderate scenario, the Robert Koch Institut currently assumes a lethality of 0.56%.¹ In the further modeling, a case mortality rate of 1.2% is used.

We assume that 5% of the infected people have to be hospitalized and 30% of them need intensive medical care and another 20% require at least ventilation using appropriate equipment. The RKI assumes a hospitalization rate of 4.5%, of which 25% will require intensive care.² In addition, we assume that the length of stay in the intensive care unit is ten days if the patients are transferred as quickly as possible, to be able to use scarce resources for the following patients. We set nine days for ventilation on a ventilator and eight days for patients who need hospitalization without such support. The mortality rates are differentiated according to the type of action. Based on the total number of infected people, it is 1.2% for good hospital care in the model and 2.0% for rationing due to insufficient hospital care - each based on the population of all infected people.

Regarding the capacities of hospital care, we assume that 14,000 intensive care beds are currently available for people infected with COVID-19. Another 14,000 are available for patients with other diseases. However, these might not be sufficient to adequately supply emergencies (e.g. heart attacks, strokes, etc.). We also assume that there are 18,000 ventilators for people infected with COVID-19 and almost 300,000 beds in hospitals and rehabilitation clinics. We also assume that we will be able to successively increase these numbers over the next few weeks - to 24,000 “free” intensive care beds, 28,000 ventilators and an additional 60,000 beds in hotels and exhibition halls.

With regard to the rate of spread, the number of reported infected cases in Germany currently seems to double about every three days. Initial measures to reduce physical contacts, such as the ban on large events and the minimization of travel, should lead to an increase in the time until the number of infected people doubles. In the worst-case scenario, we assume that the doubling time will increase from three to six days by April 14 - and to nine days by the end of April. Under these worst-case assumptions, the number of infected people will nevertheless increase rapidly and will soon make up 70% of the population. A massive overload of the health care system can therefore be expected. Over 80% of the intensive care patients would have to be rejected by the hospitals due to a lack of capacity. It is taken into account that additional intensive care beds and ventilation equipment will be made available in the near future. The rationing phase could last two months. In this scenario, more than a million deaths would be expected.

In order to prevent the Worst-Case scenario and to achieve a “Extended Scenario” much more penetrating measures need to be taken for the enforcement of social distancing. The doubling in the number of sick citizens need to be slowed to nine days before the end of April. Even in this case 15% of the affected citizens would not be admitted by hospitals. Ventilators would still be available in case new units are timely provided for. Under this scenario, the infection would spread for seven months and the number of victims would still be enormous, approximately 220,000 people. The economic consequences of the prolonged crisis would be catastrophic.

The most discussed scenario is the so-called “Hammer and Dance”: A general process of testing and isolation could keep in check the spread of the virus. In this scenario, around one million Germans would be infected, but only 12,000 would die. The restrictions inherent to this model could last around two months. However,

¹ https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Modellierung_Deutschland.html 2 ibid

² ibidem

since only a minority of the population would develop immunity, continuous further vigilance would need to remain in place.

3. Economic and social consequences

The German economy is a high-performance machine that provides a high level of material prosperity year after year and public goods that are accessible to all citizens, such as comprehensive health care and public security. Their performance is supported by a high degree of division of labor within and outside the country. The prerequisite for this is that the majority of all existing companies and employees are operational and the integrity of the overall system is not questioned.

This is exactly what makes the economy as fragile as a high-performance engine, because only the simultaneous functioning of all its components preserves the functionality of the entire system. In normal operation, moderate economic fluctuations can be effectively smoothed out over time, especially through social security systems. As long as the machine is running at full speed, minor system malfunctions are not a serious problem. Each day of work more or less translates into a slightly larger or smaller GDP in the final accounts. This “normal world” is now overridden, we are in unknown territory.

If the measures proposed here to contain and control the Covid-19 epidemic do not work, the entire system could be put into question in the sense of a “meltdown”. This threatens to change the community to a completely different state, one that is close to anarchy. Accordingly, it would be naive to assume that a two-digit percentage decline in GDP, for example beyond 20%, would mean a linear progression of losses from the absence of a few working days and would otherwise not call into question the overall system. For this reason, the strategy of containment - which dominates all other considerations - must be combined with precautions in order to keep the economic consequences as low as possible.

The prerequisite for this is that the strategy for containment and control of Covid-19 is consistently implemented. Because if one were to be too timid, the health care capacities would be overloaded just as if the strategy were initially successful but was loosened too early. The only viable option should therefore be to set up a two-step strategy. It requires:

- (i) the strictest possible suppression of the new infections until the reproductive rate is close to 1; and
- (ii) a comprehensive and consistent system of individual testing and isolation of the identified cases.

That would allow the rest of the economy to quickly return to normal operating conditions and open up the prospect that this crisis will not be greater than the economic and financial crisis in 2009. It would of course be better if this second stage could be initiated immediately avoiding economic losses. But that is not possible, the test capacities have to be built up first. As long as this does not happen, only the “hammer” (“The Hammer”) of strong social distancing remains, regardless of the exact state of infection of all those affected.

The time bought with this first level must be rigorously used to develop the test strategy for the second level. From an economic point of view, it is important to provide households and companies with acute support

services during this period and to create the basis for the prerequisites for restarting economic activities when entering the second stage.

The provision of extensive financial resources for the financial sector can be only one part of the economic policy course. Because various factors make the current crisis (even with comparable GDP losses) more serious than the economic crisis in 2009. The crisis at that time started in the financial sector and particularly affected industry. The COVID-19 crisis affects business life more broadly, also affecting service providers and will thus have a stronger impact on the labor market. At the same time, the stabilization measures in 2009 could be concentrated on the financial sector as a key element relevant to the system. Such a “quarantine” of a sector is impossible with COVID-19. Even with comparable GDP losses, the COVID 19 crisis will be broader, deeper and longer than the financial crisis.

Economic development scenarios

This conclusion can already be illustrated using rough rollover calculations that do not take into account the various adjustment processes and complications. The estimates presented here are based on national accounts based on bottom-up estimates of the importance of the crisis for the different economic sectors. Macroeconomic modeling is deliberately not attempted here, since its functionality is doubtful for the current situation in view of the considerable and, above all, dynamic changes in numerous variables. The values determined for the development of GDP and industrial added value are based on numerous settlements and assumptions. Each one is vulnerable, but they are used to determine a first overall picture in different scenarios. The settlements are rather conservative, so they represent the upper middle of the possible developments and are not worst-case scenarios.

The crucial point is that the scenarios do not differ, or only indirectly, according to the spread of the virus infection in Germany, but according to the politically enforced and medically necessary reactions to it. The duration of the interruption of the normal division of labor and market processes (here national) is the decisive influencing factor.

Scenario 1: "quick control"

The first scenario assumes that the spread of the epidemic can be slowed down after an initial period of exit restrictions and that the number of cases will decrease significantly within six weeks. This corresponds to a period until the end of the Easter holidays and thus largely corresponds to the current status quo, possibly supplemented by the enforcement of assembly bans. A further restriction due to exit restrictions is not assumed here. In view of the economic consequences, but also the social inequality consequences of prolonged homeschooling, it seems imperative to bring the kindergartens and schools back to normal operation after the Easter holidays. In the further course, the infection is checked through intensive testing, follow-up and isolation, possible prohibition of large events or selective interventions. Social and economic life largely returns to normal. This scenario corresponds to the positive experiences from East Asia.

After the phase of exit restrictions of 1.5 months, major industrial sectors are expected to experience another month of massive disruptions due to closed borders and the associated interrupted supply chains. This

assumes that the pandemic has a comparable time profile, at least in Europe; Developments in the USA are a source of particular uncertainty, but there are fewer interdependencies there.

The phases of the slump are followed by two months with reduced disruptions, in which economic activity gradually returns to normal. For another three months catch-up effects are taken into account, which compensate for one third of the economic management lost in a crisis month in each of these months.

This scenario results in a **4 percent drop in GDP** compared to the reference scenario and is to be seen as an economic best case. For industry, this means a minus of 9 percent. For comparison: In the Great Depression of 2009, GDP fell by 6 percent, industrial added value by 19 percent. The state budget would have to spend more and less than 80 billion euros. The developments assumed here therefore lead to a somewhat weaker decline in GDP than in 2009, whereas the service sector would be more affected. However, the downside risks contained therein make it plausible to assume that the downward momentum will be largely comparable to that of the global economic crisis.

Scenario 2: "Return of the crisis"

The second scenario assumes that with initial restrictions of two months, the spread of the infection can be massively reduced. A largely normal economic life is then possible. However, in the second half of the year the epidemic returns in no less dramatic dimensions. Such a development can also be expected for the following year.

Economic activity would be significantly reduced in the months of the initial restrictions, gradually returning to normal in the two following months. Due to the expected new outbreak of the disease, there are no catch-up effects. In autumn, two months with exit restrictions and two of the recovery are also assumed.

For the economy as a whole this scenario means a **decline of 11 percent**, for the industry a decrease of 19 percent. In industry this is similar to the crisis of 2009, in the service sector the decline is much more pronounced. However, this scenario is significantly more critical than the crisis of 2009, because a double wave of infections could also be expected here next year. The crisis would therefore last twice as long, which would not be comparable to 2009 and the subsequent upswing in 2010.

Scenario 3: "long suffering"

The third scenario assumes that the epidemic cannot be contained quickly. Initial restrictions of four months are necessary, i.e. until the summer vacation in mid-July. Subsequently, no significant restrictions for economic life are made. Accordingly, a clearly subdued economic activity for four months and a return to normal in another two months are assumed. There will be catch-up effects in three more months, but only to a lesser extent due to the experience of the crisis and the high level of uncertainty.

A **decline of 9 percent** is expected for the overall economy, and 15 percent for industry. This is more of an optimistic assumption. Possible self-reinforcing effects that occur with the long period of the crisis are not taken into account here. If there is a systematic downward spiral, not just a slump to a lower level that is then stable for four months, deeper cuts are to be feared, this also applies to a further extension.

Scenario 4: “Abyss”

The fourth scenario assumes an uncontrolled and uncontrollable development. The virus epidemic cannot be contained. Exit restrictions are set for the rest of the year. This means a permanent reduction in economic activity to a lower level. A further reduction in economic output is assumed after four months with exit restrictions.

In this situation, GDP would **collapse by 32 percent**, industry by 47 percent. With further intensifying second-round effects and established negative expectations, an accelerated downward dynamic cannot be ruled out. This scenario is tantamount to an economic collapse, the social and political consequences of which are hard to imagine.

Assessment

For all uncertainties, the estimates show that scenario 1 (“quick control”) must be worked on under all circumstances. Scenario 4 (“Abyss”) would be an unimaginable economic catastrophe that would lead to consequences that are hard to imagine in society. The treatment of the sick would probably be called into question rather than the permanent shutdown of the country being accepted. Scenario 3 (“long suffering”) threatens to become as critical if the initial restrictions are extended further and to transform into scenario 4 (“abyss”). It is never clear in this way whether it leads into the abyss - this will release negative dynamics that accelerate downward developments. Scenario 2 (“Return of the Crisis”) represents a sharp contraction without returning to the old level next year.

Scenario 1 (“quick control”) gives the opportunity to come out of the crisis with an economic balance sheet that is similar to the 2009 global economic crisis. This is bad enough, but it would be a glimmer of hope. It is crucial that on the one hand it is possible to stop the exponential spread of the virus and to reduce the infection rate (R_0) to less than 1 before Easter. On the other hand, it must be possible to prevent interventions that do not destroy economic and social life in Germany from returning to uncontrolled waves of infection. For this, the infection rate must be kept at a maximum of approx. 1. Comprehensive testing, the identification of contact persons via electronic movement profiles, the isolation of sick people and suspected cases, possibly the prevention of major events or access restrictions for old age facilities can contribute to this. Permanent or even longer exit restrictions must be avoided.

Necessary economic policy measures

Phase I of the COVID-19 control was initiated at the latest with the partial exit restrictions from March 16, 2020 with school closings, mobility restrictions, business closings, office and production closings etc. and tightened by assembly bans etc. In order to reduce the incidence of new cases after the end of the initial restrictions (phase II) and then keep them at a stable level so that another uncontrolled outbreak can be prevented, extensive health policy measures are necessary. These measures and the structures required for this must be implemented and set up at short notice in order to be able to enter phase II credibly after the Easter holidays. A return to the previous economic and social life can only be guaranteed with a foreseeable end to the initial restrictions.

In order to limit further economic damage, the following economic policy measures are necessary, some have already been decided:

- The expansion of part-time work to limit unemployment, as in the 2009/10 financial crisis, has already been decided. This also reduces the solvency risks for companies.
- Liquidity aids to ensure the short-term viability of the affected firms over development banks (loan support) and tax deferrals as already deliberated.
- Direct company transfers, limited in time for companies that suffers both from supply shock and from demand shock and whose business has been hit by the COVID-19 crisis beyond the liquidity problems.
- Participation in companies through a sovereign wealth fund: The currently projected economic stabilization funds should also provide for equity participation in large companies. State involvement must be given a clear perspective of exit from the crisis. Responsibility for small business owners lies at the level of the federal states simply because of the proximity and the administrative advantages.
- Tax relief to limit massive losses from the economic crisis. Here are opportunities for a positive impetus from the crisis, which can also be seen as the starting signal for a renewed upswing.
- Stabilization of local government finances, which will come under massive pressure as a result of additional spending as a result of the standstill and the anticipated slump in revenues from taxation on business activity. Here the federal states have to fulfill their responsibilities.
- Cyclical measures after the end of the crisis if demand-side impulses are necessary.

A particular economic and political challenge is likely to be that the exit from the crisis mode and the standstill in collective activities affect very differently the demand levels for the various business sectors.

- If the restrictions on public life can gradually be lifted after Easter, the consumption areas should be reactivated quickly. People want and can consume. State aid would in most cases be limited to bridging liquidity plus one-off transfers.
- In many, especially business-related service areas, business activity could also start again, e.g. auditor, inspection, car service. For movable services such as construction work, the expectation of sustainable stabilization is crucial.
- In the crisis phase, internationally active companies are limited both by the lack of outsourcing, especially from abroad, and by the unavailability of workers. The latter will relax when the schools and daycare centers open again. For the former, only the availability of transport capacities etc. at the national level can make a contribution. The asymmetry with regard to the time profiles of the economic crisis in other economies remains an ongoing burden for an internationally intertwined economy like the German one. This is where companies are asked to adapt their flexibility. However, this would also mean that internationally active companies can be dependent on economic policy support for longer periods (for example through equity investments).

Against this background, the economic policy response to the current crisis cannot remain purely national. It is also not enough to leave responsibility for the European dimension of the economic policy response to the European Central Bank (ECB) alone. Rather, a coordinated fiscal strategy is required at the European level. These efforts must include financial support for other EU countries that would otherwise be financially overburdened by the containment of the crisis (particularly Italy). In addition to the ECB's PEPP, other instruments must therefore be set, such as existing or new credit lines from the European Stability Mechanism ESM or COVID-19 community bonds. The discussion about the specific instruments should not obscure the need for a coordinated fiscal strategy.

4. Conclusions for action and open communication

4 a. Clarify the worst case!

We have to get away from communication centered on the case mortality rate. Focusing the communication on the mortality rate, which sounds insignificant in percentage terms, and which affects the elderly in particular, many then think subconsciously and admittedly: «Well, this is how we get rid of the elderly, who are pulling our economy downwards, we are already too many on earth anyway, and with a little luck I inherit a little earlier». These mechanisms have certainly played down the epidemic in the past.

In order to achieve the desired shock effect, the concrete effects on human society must be clarified:

1) Many seriously ill patients are brought to the hospital by their relatives, but are rejected, and die painfully at home struggling for air. **Choking or not getting enough air is a primal fear** for everyone. The situation in which there is nothing you can do to help relatives who are in danger of dying is also the case. **The pictures from Italy are disturbing.**

2) "Children will hardly suffer from the epidemic": Wrong. Children will get infected easily, even with exit restrictions, e.g. through the neighboring children. Then when they infect their parents and one of them dies painfully at home and they feel **guilty** because, e.g. they forgot to wash your hands after playing, **it's the most terrible thing a child can ever experience.**

3) Consequential damage: Even if we only have reports on individual cases so far, they paint an alarming picture. Even those who seem to have healed after a mild course can apparently experience relapses at any time, which then suddenly end in death due to heart attack or lung failure, because the virus has found its way into the lungs or heart unnoticed. These may be isolated cases, but will always hover over those who have been infected like the Damocles sword. A much more common consequence is fatigue and reduced lung capacity for months and probably years, as has been reported many times by SARS survivors and is now the case with COVID-19, although the duration cannot, of course, be estimated.

In addition, historical arguments should also be used, according to the mathematical formula: **2019 = 1919 + 1929**

One only has to illustrate the figures shown above with regard to the assumed mortality rate (more than 1% in the case of optimal health care, i.e. well over 3% due to congestion or due to infection), compared to 2% in the case of the Spanish flu, and in relation to the expected economic crisis when the containment fails, this formula will make sense to everyone.