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Research Report

The business ethics of the Corona crisis: A critical analysis of political measures, economic consequences, and ethical challenges

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IW-Report 55/2020

The Business Ethics of the Corona Crisis

A critical analysis of political measures, economic consequences, and ethical challenges
Prof. Dr. Dominik Enste, Jennifer Potthoff

Köln, 28.10.2020

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- A12 Relation of Economics to Other Disciplines
- H12 Crisis Management
- I18 Government Policy • Regulation • Public Health

Summary

This research work is intended to analyze the economic consequences and ethical challenges that are caused by the coronavirus pandemic and to predict whether one can find a balance within the arising conflict of interest between economy, health and ethics. The solution strategies of Germany, Sweden and South Korea will be compared in order to evaluate different types of crisis management and to finally derive possible lessons from the crisis. This work's methodology is an analytical one and is primarily based on an analysis of most recently published economic studies and surveys as well as on an evaluation of literature such as most recent statements and publications of economic, ethical and medical – ethical institutions. The analysis has proven the multi - dimensionality of the crisis. Besides the grave macroeconomic consequences for the whole economy, depending on which industry is considered there are differences in the extent of the impact of the crisis which finally leads to losers and winners at the same time. In addition to the macro – and microeconomic damage, the social psychological consequences caused by the national lockdown of 2020 such as depressions and suicidality triggered by isolation and existential fears as well as the increase in domestic violence are equally important to mention. Overall, the measures taken from the government to contain the virus lead to a grave collateral damage and the pandemic causes ethical dilemmas both from a social – ethical and a medical – ethical level due to high restrictions of fundamental rights, an intervention in data privacy, the measures' limitations with regard to the concept of equality of opportunities and the possibility of a triage situation. As a result of this multidimensional impact for different areas of interest, it is particularly important to involve a wide consensus of science into the decision – making process and to not only trust the virologists. In order to minimize the collateral damage of the crisis it is recommended to provide help and support for the social groups being most affected by the crisis and to apply economic and financial instruments such as short – time work and liquidity assistance in order to minimize the number of German insolvencies. However, as only a vaccine will provide a long – term solution, the central aim for the next months is to continue creating a new normality that reconciles the protection of people's health, social and economic interests as effectively as possible in order to prevent deaths on the one hand and to keep the collateral damage of the crisis to the lowest possible level on the other hand.

1 Introduction: Panic- vs. Risk-Management

The global pandemic caused by the virus SARS-CoV-2 is challenging our health system, society, economy and political system like never before. Overall, the crisis has a deep impact on people's everyday live. According to the United Nations "[...] The coronavirus COVID-19 pandemic is the defining global health crisis of our time and the greatest challenge we have faced since World War Two" (Steiner, 2020). In order to respond to the occurring negative consequences in the most responsible and most suitable way, well – considered choices and decisions are particularly important and the right way to deal with these problems is crucial to how we will manage this crisis in the upcoming months. Especially in the very early stage of the crisis the central aim was to prevent an exponential increase in the number of infected and sick people in order to avoid an overload of the health system and to thus, protect thousands of people from death. For this reason, the government started taking drastic nationwide measures which strongly restricted civil liberties. In March 2020 we started living a life characterized by mass quarantine and social distancing in Germany. The lockdown of public and social life in combination with other health protection measures was essential to avoid a saturation point of the health system.

However, the coronavirus pandemic is more than a health crisis. Additionally, it provokes an economic and financial crisis throughout the whole world. Employees and entrepreneurs are confronted with uncertain employment prospects, a loss of income and existential needs (Feld et al., 2020). In addition to the economic aspect, it is important to consider the psychological consequences of a mass quarantine. Moreover, one has to put into account the fact that we are still "only" at the beginning of the pandemic and the impact will further increase. As already indicated, the adopted measures lead to grave economic and psychological side effects. For these reasons, regarding the ongoing second phase of the COVID-19 pandemic it is noticeable that in addition to the medical science there are increasing discussions about non – medical issues. In other words, the ongoing crisis management does not only consider the medical perspective but instead it takes into account also other affected areas such as the economy and ethical questionable issues. The massive economic and social consequences need to be absorbed by appropriate instruments and measures and at the same time the stability of the social system has to be guaranteed. Moreover, it is still unclear and not yet certain when a vaccine against the virus will be available in order to provide a sustainable and long – term secure solution (Sharpe, 2020, 2). We are committed to do everything necessary to meet these challenges in a spirit of solidarity and responsibility but how does this work?

This pandemic still raises many questions and the current situation is still creating confusion in a broad spectrum. Within this context of threats, uncertainty, public alarm, a still existing kind of social and physical distancing what has been and can be the role of business ethics? This research is mainly going to answer on the question: How can we handle the different goals and interests between economy, ethics and health? Thus, the overall aim of the analysis is to predict whether one can find a balance between these main areas of interest and if so, how does a potential compromise look like? In terms of the impact, the question raises who is most affected by the crisis? Who are going to be the winners and losers of the crisis? Moreover, this analysis is intended to introduce into ethical questionable issues and it will discuss the legitimacy and legality of the restrictions of fundamental rights, civil liberties and the concept of equality of

opportunities in times of Corona crisis. In addition to this, strong discussions and diverged opinions occur when it comes to the aspect of human dignity and there are debates about an unexceptional protection of life. Should everything else be subordinated to the protection of human life? In addition, this analysis gives answers on hard decision – making questions such as how doctors must decide in case of triage. To sum up, this work will present how one can relate all these above - mentioned issues and questions to the field of business ethics. Due to the mentioned variety of starting points and questions that arise one can clearly see that this topic delivers a huge potential for conflicts and a broad base for discussions. As a result of the broad range of consequences and challenges the pandemic has become the currently most important political, economic and social issue not only in Germany but throughout the whole world since almost every country is exposed to the crisis. In other words, the crisis caused by the global coronavirus COVID-19 pandemic is currently the most relevant topic for our society, our policy and our economy.

The analysis is primarily based on most recent studies, documents and publications of economic institutions such as the ifo Institute, International Monetary Fund (IMF), World Trade Organization (WTO) and Robert Koch institute. Furthermore, relevant statements and recommendations of the German Ethics Council and the German Interdisciplinary Association for Intensive and Emergency Medicine as well as data collated by the German Federal Ministries and the German Federal Statistical Office are used. Moreover, the analytical results of this work are based on a representative study conducted by the Technical University of Munich (TUM) and a survey of the German Chamber of Industry and Commerce (DIHK) in combination with the German Chambers of Foreign Trade (AHK).

This analytical work is structured in the following manner: The introduction into the topic is followed by a part of theory which is intended to briefly introduce into the most relevant theoretical background which starts with an explanation of ethics in economical context. Hereby, it is important to clarify that this research is not focusing on ethical issues in terms of businesses or companies. Instead, it considers the overall economic - ethical point of view and decision – making process. Moreover, the section theory includes an introduction into the major ethical theories such as deontology and teleology as well as a presentation of the ethical experiment “The Moral Machine” and an explanation of the concept of cultural relativism. The main body of this research paper starts with an analysis of the crisis’ impact in Germany in economic and social psychological perspective and is followed by an overview of ethical challenges in medical – ethical and social – ethical perspective. Then, a comparison of solution strategies is elaborated by contrasting Germany with the countries South Korea and Sweden with regard to their health situation, measures of the pandemic, ethical attitudes towards issues such as depriving people’s freedom and disrespecting data privacy and lastly, the resulting economic impact of the crisis will be contrasted as well. Finally, the main results are concluded and this research paper is completed by a brief overview of lessons from the crisis and an outlook.

2 (Business) Ethical Theories

The economic decision-making process is mainly dominated by stability and growth policy considerations as well as by the pursuit of profit maximization and securing of a market position. This strong focus on economic rationality partially hides the importance of other aspects of economic action. Nonetheless, particularly in recent times, a more intensive discussion of the moral qualities of economic activity has gained importance (Nida-Rümelin, 1996, 292 f.). The concept of business ethics can be defined as the interaction between ethics and business or economic activity and the goal of this form of applied ethics is to contribute to an expansion of the consciousness of economic rationality through the ethical reflection of economic action. In particular, the field of business ethics deals with the relationship between economic reality and economic rationality, the corresponding ethical assessment procedures, the analysis of moral qualities of economic action and the responsibility for economic action as well as with the respective addressees of moral standards (Nida-Rümelin, 1996, 293 ff.). Regarding the systematic classification of business ethics, there are different approaches that can be chosen. A systematic classification can be done by using the different approaches of business ethics which include the order-theoretical, discourse-ethical, operationalist, intentional, socio-economic, pragmatic, social-ethical and Neo-Aristotelian approaches. In addition to the above - mentioned classifications of business ethics, the term is also influenced by two different main ethical theories which will be explained in more detail below.

2.1 Major ethical theories

2.1.1 Deontological ethics

Deontology is an ethical theoretical approach according to which a strict observance of norms, duties and rights is the basis of moral action. The terms “deontology” and “deontological” come from the Greek word “deon” which means “obligation”, “duty” (Black, 2014, 95 f.). Therefore, deontology can be defined as the style of ethics which focuses on duties defined by right and wrong whereas the right actions are the ones we are morally required to do and the wrong actions are the ones we are morally forbidden to do (Kranak, 2020). From a deontological perspective, the consequences of an action can be desired or deplored but they are not primary relevant (Black, 2014, 95 f.). Accordingly, deontology rather focusses on questions such as “[...] What makes an action right or wrong?” and “Which actions are we required by morality to perform? [...]” (Kranak, 2020).

The German philosopher Immanuel Kant belongs to one of the most important and influential formative representatives of this theory which is the reason why this ethical approach is also called “Kantian ethics” or “Kantianism”. According to Kant's imperative, you should only “[...] act according to that maxim by which you can at the same time want it to become a general law” (Krüger/Rapp, 2006, 320). This formulation of Kant stresses the fact that the deontological approach considers the action itself as the basis for a moral evaluation. As the action itself is judged, it must, consequently, be ethical and moral in itself whereas the outcome of the action is secondary. For example, a lie that is forbidden and unethical remains unethical even if that lie could prevent a greater number of lies. The German Basic Law has derived some laws from the

deontology's normative guidelines. An example of this is Article 1 (1) of the German Basic Law: "The dignity of a human is inviolable. To respect and protect it is the obligation of all state authority" (Federal Government, 2020).

In order to mention another real life example for the deontological ethical theory, Article 35 of the German Constitution can be mentioned which indirectly prohibits cases such as that an aircraft carrying terrorists who, for example, are planning an attack on the Munich football stadium are forbidden to be shot down and thus be taken out of action, even though this measure could save the lives of, for example, 70,000 people who are located in that stadium. The main point is that from Immanuel Kant's point of view, human lives cannot be weighed against each other (Weinlein, 2020). Since this measure would not only kill the terrorists but would also actively kill the innocent people inside the plane, this act is in itself ethical unacceptable and is to be regarded as an unconstitutional action according to the German constitution. Accordingly, from a deontological perspective, an action or a decision in which someone is harmed is automatically immoral. Generally said, one cannot violate the dignity of the human being for the good of the state, even if the total sum of people would be happier (Knoepffler, 1999, 167 f.).

2.1.2 Teleological ethics

Another major ethical theory is the teleological one which is mainly characterized by the utilitarian approach. The British lawyer, philosopher and social reformer Jeremy Betham (1748 - 1842) and his follower the British philosopher, politician and economist John Suart Mill (1806 - 1873) belong to the founders of classical utilitarianism (Sweet, 2020). During their lifetimes the utilitarian approach has become one of the most important moral philosophical positions, especially in the English - speaking world.

Utilitarianism is a moral - philosophical analysis in the sense of a theory of goals. More precisely, it reconstructs the morally right action as the result of a rational choice between different possibilities. The main difference to the deontological ethical theory is that rules of action are not judged as right or wrong by themselves or by their characteristics. Instead, the consequences of an action are in the center of attention and the result of an action is evaluated according to its usefulness or utility (Höffe, 2008, 7 ff.). The term utilitarianism can be explained by the Latin word "utilitas" which means utility. According to the utilitarian approach, the highest and greatest value is the fulfilment of human needs and interests (Jensen-Jarolim, 2014, 287). As already indicated, actions and development processes are oriented towards purposes and run in a target – oriented manner. It applies, so to speak, that everything is good that leads to the greatest happiness of the greatest number in relation to all people affected by an action. Accordingly, the work of the common good counts, not the will. For this reason, according to the utilitarianism, particularly required is what is most pleasurable (positive utilitarianism) and what avoids unpleasantness (negative utilitarianism) for all parties involved (Höffe, 2008, 11). Thus, the theory of utilitarianism commits human action to general well - being and the representatives of this ethical theory try to fulfil this commitment by acting according to their imperative of action: "Act in such a way that the consequences of your actions are optimal for the welfare of all concerned" (Höffe, 2008, 11).

2.2 The Moral Machine experiment

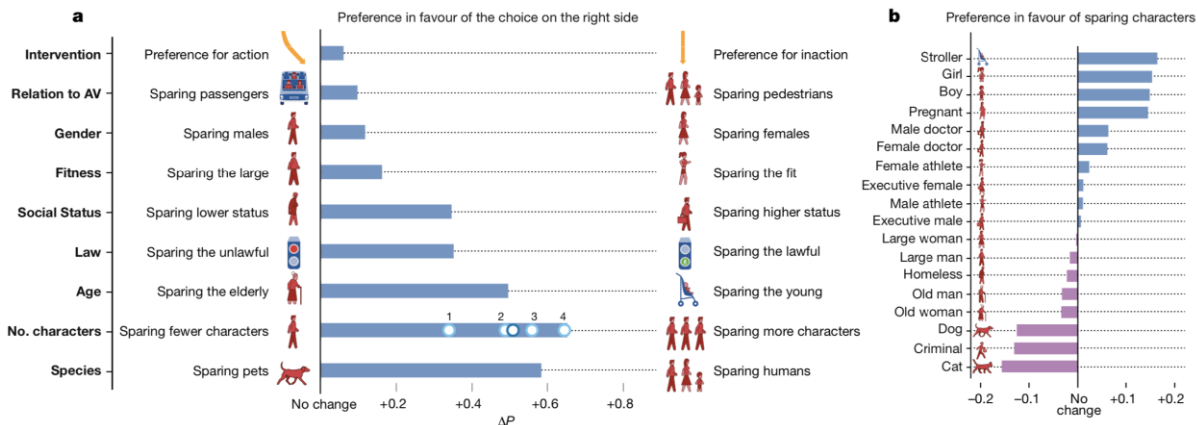
One famous ethical experiment is the Trolley experiment. This traditional concept has been applied in the so called “Moral Machine” experiment, which is an online experimental platform that was created by the intention of exploring the moral dilemmas caused by autonomous vehicles. In particular, the experiment captures how people feel about moral decisions made by intelligent machines such as self-propelled cars. In total, 233 different countries and territories were involved in the Moral Machine experiment and 39.61 million decisions in ten different languages were included. By a collection of this worldwide data and the assessment of demographic and cultural moderators of ethical preferences this experiment is intended to deliver “[...] an understanding of how different individuals and countries may differ in their ethical preferences” (Awad et al., 2018, 59). The experiment illustrates scenarios of moral dilemmas where a driverless car must choose “the lesser of two evils” depending on whether the autonomous vehicle swerves or stays on course. Thus, the participants of the experiment were exposed to unavoidable accident scenarios of with two different possible outcomes and they showed their moral decision by clicking on the possible outcome which they prefer (Awad et al., 2018, 59).

In total, the surveyed people were exposed to nine different prioritizing decisions (Figure 2-1: Global preferences). These potential priority decisions include choices such as rescuing more lives versus fewer lives, sparing men versus women, saving the younger ones versus the elderly or rescuing the fitter ones versus the less fit ones etc. (Figure 2-1: Global preferences).

Moreover, the experimental set – up computed an average marginal component effect (AMCE) of each of these nine attributes (e.g. male character versus female character). Figure 2-1 (a) shows the results of this unbiased estimates of the nine different AMCEs that were delivered by the Moral Machine data. Each bar of this figure shows the difference between the probability of sparing characters with the attribute on the right side and the one on the left side. As shown in Figure 2-1, one can sum up a few main global preferences which include the priorities to save a human instead of an animal, to save the greater number of people and to save the kids instead of the elderly. In addition to this, part b of Figure 2-1 reveals the fact that the four most spared characters are the baby, the little girl, the little boy and the pregnant women (Awad et al., 2018, 60).

Despite these main global preferences, the results of the Moral Machine experiment also indicate some cross – cultural ethical variations (Figure 2-2). These occurring variations can be summarized into a few main global clusters with different moral profiles and thus, the experiment shows how people’s culture and their background affect the decisions that they make. In order to seek different clusters, the team of the Moral Machine Experiment selected 130 countries with at least 100 respondents, standardized the 9 target AMCEs of every country and finally conducted a hierarchical clustering on these 9 scores (Awad et al., 2018, 61).

Figure 2-1: Global preferences



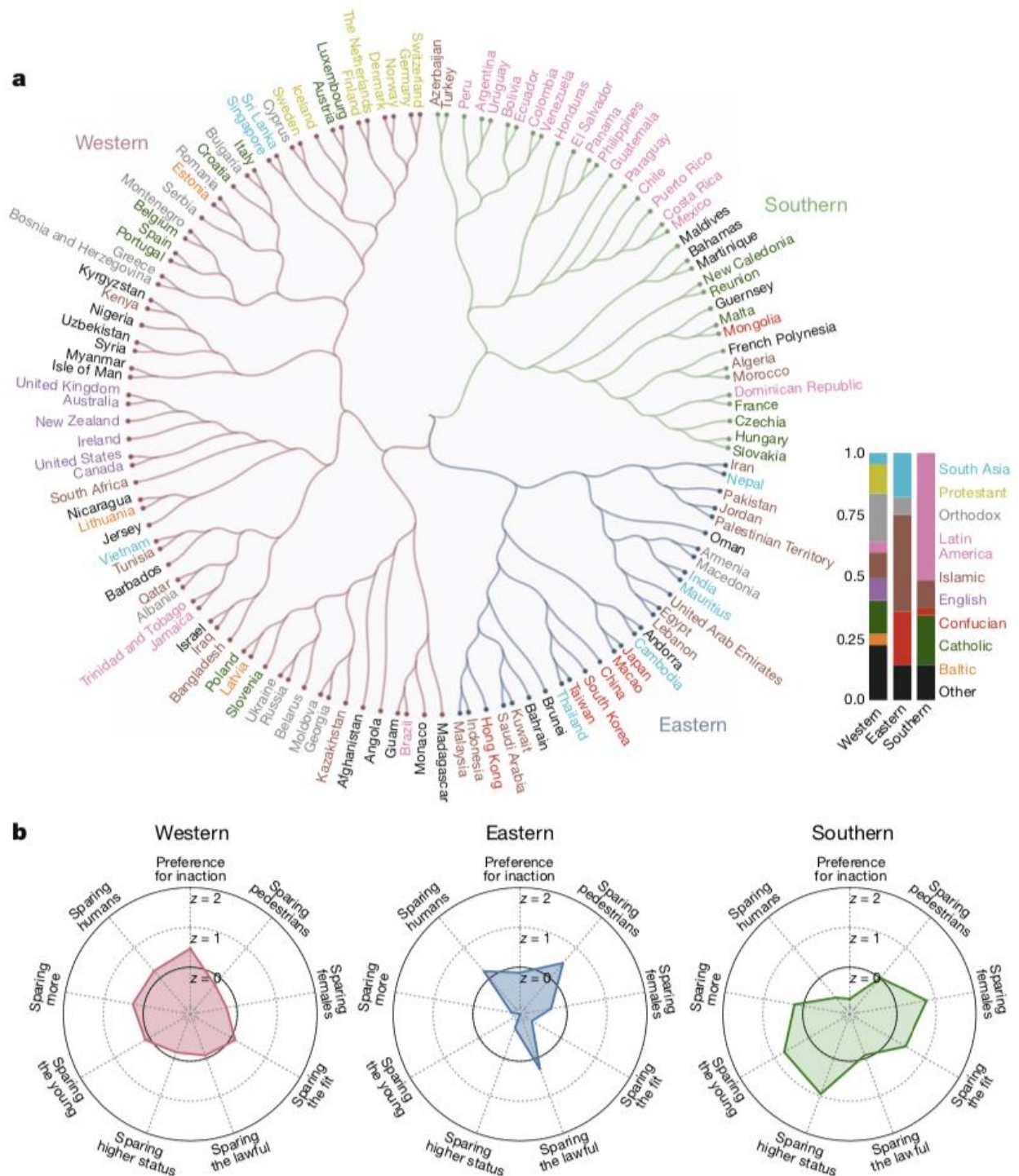
Source: Awad et al., 2020, 61

The first cluster, also called the Western cluster, is made up by Western countries such as North – American and European countries to which belong Protestant, Catholic and Orthodox societies who tend to have a relatively high preference for saving humans and saving the greater number but a less distinct preference for saving females over males. The second cluster (Eastern cluster) is mainly composed of Asian countries such as China, Japan and Taiwan which belong to the Confucianist cultures and Islamic countries like Saudi Arabia, Egypt or Indonesia (Figure 2-2 (a)). This cluster attracts attention by not having such a strong preference for saving young lives and therefore, people from these countries tend to be more protective of the elderly.

The third and last global cluster, the “Southern Cluster”, is mainly represented by countries of Central and South America (Figure 2-2 (a)). In addition, former French colonies like metropolitan France and French overseas territories pertain to the third cluster as they also belong to this cluster’s moral profile which is characterized by a weaker preference for sparing humans over pets when being compared to the other two clusters. In addition, the Southern cluster attracts attention by having a distinct preference of rescuing women instead of men and this group of countries seems to prefer rescuing the lives of young people and the people of higher status which is a moral attitude that highly disagrees with the aforementioned Eastern cluster.

Figure 2-2 (b) gives an overview over these three different global clusters and their moral preferences in terms of the respective attributes. Nonetheless, there is a commonality of all clusters which is a general weak preference for the protection of pedestrians over passengers (Awad et al., 2018, 61). An additional insight of the experiment is the fact that the higher the inequality within a country is (measured by Gini-Index), the more people are willing to spare the executives at the cost of homeless people. There is a tendency of participants from countries with less economic equality treating the rich and poor less equally in the experiment.

Figure 2-2: Country - level clusters (a) and Mean AMCE z-scores (b)



Source: Awad et al., 2018, 62

However, the country Germany seems to have its own rules when it comes to moral development. One of these rules is that “[...] in dilemma situations, the protection of human life should enjoy top priority over the protection of other animal life” (Awad et al., 2018, 60). An additional German ethical rule is that a distinction based on personal features such as age should be prohibited. This rule is protected by the principle of equality, enshrined in Article 3 of the German

Basic Law. In contrast to the insights for Germany, the experiment shows that the participants of utilitarian countries such as the United Kingdom and the United States of America seem to have a higher preference for saving a larger number of people and also a significant preference for saving younger people instead of older ones. These insights prove the utilitarian way of thinking such as the general principle that everything is good what leads to the greatest happiness of the greatest number in relation to all people affected by an action (2.2.2. Teleological ethics). Nonetheless, since this paper mainly focusses on Germany's pandemic measures and ethical attitude which will be contrasted to Sweden and South Korea in "4. Comparison", a brief contrast between the moral preferences of these three countries might be interesting.

Table 2-1: Country comparison - Ranks in Moral Machine Experiment

Sparing ...	Sweden	Germany	South Korea
more people	43th	45th	110th
the Fit	71th	73th	103th
the Younger	50th	63th	110th
the Higher Status	91th	107th	103th

Source: Awad et al., 2018; Enste/Eyerund, 2020

Table 2-1 presents the rankings of Sweden, Germany and South Korea with regard to their moral preferences based on the results gained from the Moral Machine experiment. Whereas a higher (better) rank implies a high preference for the respective decision, a low rank signifies a less distinct preference for the prevailing moral choice. Due to Germany's low rank (107) in terms of the indicator "Sparing the higher status" the country seems to not make a distinction between the status when it comes to the decision of rescuing people's lives. In addition, German participants had a relatively low priority for preferring healthy and fit people over less healthy ones. When it comes to the indicator "Sparing more people" Germany is ranked in the upper midfield which can be interpreted that there is a certain preference for saving the greater number of humans but this moral attitude is still more distinct in other countries such as in Anglo – Saxon countries whose ethical ideology is characterized by the utilitarianism. Moreover, Germany seems to have a moderate preference for saving the younger generation instead of the elderly.

If one compares the German moral preferences with the Swedish ones, one can state that there are significant similarities such as a less distinct priority for preferring healthy and fit people over less healthy ones as well as a mild preference for saving the greater number. Small differences to Germany can be found in terms of the priority of saving the younger and the ones of higher status since the Swedish participants seem to have slightly stronger preferences for these two indicators when being compared to Germany.

In contrast to this, South Korea is ranked lower with regard to all indicators, both compared to Germany as well as to Sweden. One can sum up that the South Korean moral attitude is characterized by a less strong preference for sparing more people, for sparing the fit ones and as well

as the younger ones and the country also has a significant low preference for sparing the people of higher status. The biggest difference in ranks between these countries arises from South Korea's salient lower moral preference for saving more people (Massachusetts Institute of Technology, 2018).

The moral differences between the countries can be explained by the concept of Cultural Relativism which is based on the assumption that there is no single true morality. Instead, "[...] [t]here are a variety of possible moralities or moral frames of reference, and whether something is morally right or wrong, good or bad, just or injustice is a relative matter – relative to one or another morality or moral frame of reference" (Harman, 2020, 1). This implies that an action can be seen morally right in one specific culture whereas exactly the same action or decision can be regarded as morally incorrect in another country or culture. Thus, the concept of cultural relativism explains the cross – cultural variations and the resulting cultural clusters that were detected by the experiment of the Moral Machine.

However, the results of this experiment must be partially critically questioned and cannot always be used as a general statement as the experimental set - up did not introduce uncertainty about the fates of the characters neither about the classification of the respective characters. In addition, an indirect manipulation of a relationship between the participating respondents and characters (e.g. relatives) cannot be excluded (Awad et al., 2018, 63). Nonetheless, the experiment shows a general overview about cross – cultural variations in ethical preferences. Even though this research work is not intended to deal with the issue of artificial intelligence, the results of this experiment can be applied in the context of the current COVID-19 coronavirus pandemic as the Moral Machine points out general global preferences and cross – cultural similarities and differences when it comes to moral decisions about human death. For this reason, the results of the experiment can be applied in order to make potential conclusions about the different countries' moral decisions in terms of their crisis management of the current pandemic.

3 Critical Analysis of the Corona Crisis

3.1 Economic consequences

As already indicated in the introduction, the global coronavirus pandemic is more than “only” a health crisis. In order to contain the outbreak of the virus worldwide governments have temporarily frozen social and economic activity in all or at least in big parts of their countries (Masters, 2020). As a result of this several weeks lasting lockdown of public and social life many companies were forced to close, to lay off staff or to register short – time work. The economic impact of the pandemic can be regarded as a “global pain” as the whole world is affected and both developed as well as developing countries are expected to fall into a recession. In this context, Kristalina Georgieva, the head of the International Monetary Fund (IMF), warns “[...] that global growth will turn sharply negative in 2020 [...]” (Georgieva, 2020). According to the April World Economic Outlook of IMF the global real GDP growth in 2020 is expected to fall by -3%. As a comparison to this, the Global Financial Crisis of 2009 resulted into a decrease of “only” -0.1 percent in global real GDP growth. This big difference in the extent of GDP collapse proofs Georgieva’s anticipation of the crisis being “[...] the worst economic fallout since the Great Depression” (Georgieva, 2020). According to the International Monetary Fund, the crisis could even knock \$9 trillion of global GDP over the next 2 years (Gopinath, 2020b).

However, it must be stated that the outlook for the global economy for 2020 and 2021 is currently uncertain as the projections are based only on estimations. The unclear development of the “second wave” of the virus causes additional uncertainty. Therefore the figure are only a spotlight (Ende of September 2020). The high uncertainty can be proven by the range of real GDP percentage change rates (from -3.0 percent to -8.8 percent in 2020) and the respective range of trade volume estimations (from -9.5 percent to -31.9 percent in 2020) of the different international organizations which is pointed out by Table 2 (World Trade Organization, 2020, 3). By anticipating a decline of almost 1/3 of global trade in 2020 the World Trade Organization (WTO) seems to be the most pessimistic institution regarding the expected global loss in trade volume. As both the optimistic as well as pessimistic scenarios of the respective economic institutions anticipate negative real GDP figures for the economic year 2020, it might be clear that global economy will be confronted by a recession. Like anywhere in the world, the COVID-19 coronavirus pandemic is provoking an economic crisis in Germany as well. In the following, the German lockdown’s most relevant economic consequences will be discussed in macroeconomic and meso perspective.

Table 3-1: Summary of recent forecasts for global real GDP and trade volume

	Real GDP (% change)		Trade volume (% change)	
	2020	2021	2020	2021
WTO Trade forecast (April 2020)				
Optimistic scenario	-2.5	7.4	-12.9	21.3
Pessimistic scenario	8.8	5.9	-31.9	24.0
IMF World Economic Outlook (Oct. 2020/ June 2020)	-4.4	5.2	-11.9	8.0
World Bank Global Economic Prospects (June 2020)	-7.7	1.6	-15.3	2.8
OECD Economic Outlook (June 2020)				
Single hit scenario	-6.0	5.2	-9.5	6.0
Double hit scenario	-7.6	2.8	-11.4	2.5
Memo items				
IMF GDP at market exchange rates	-4.2	5.4	-11.0	8.4
World Bank GDP at purchasing power- parity	-4.1	4.3	-13.4	5.3

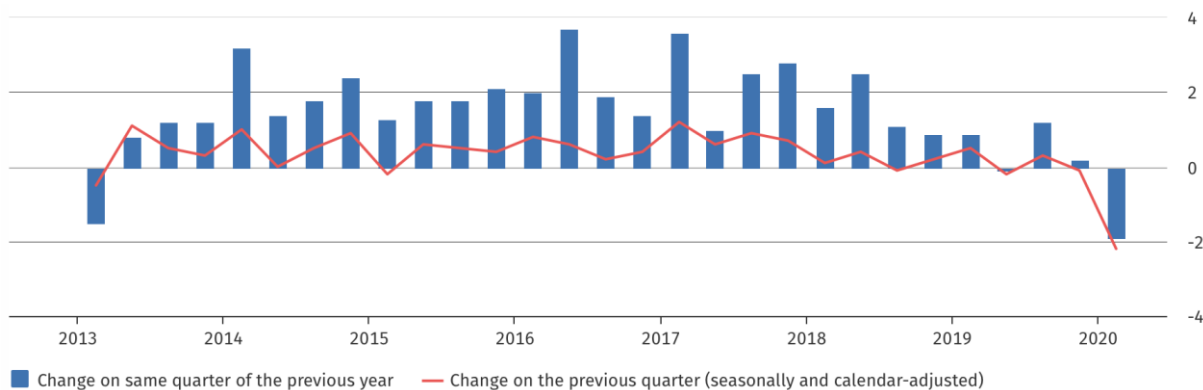
Source: Own representation based on data provided by World Trade Organization 2020, 3; International Monetary Fund, 2020; World Bank, 2020

3.1.1 Macroeconomic level

The shutdown has been and still is burdening Germany's economy without doubt. Experts are predicting the biggest recession in the history of the Federal Republic of Germany. This assumption can be proven by having a look at the development of the German Gross Domestic Product (Figure 3-1). Based on calculations of the Federal German Statistical Office, during the first quarter of 2020 Germany's Gross Domestic Product declined by -2.2 percentage points compared to the first quarter of 2019, seasonally and calendar – adjusted.

According to the Federal German statistical office, this recent negative development of GDP is the strongest decline since the Global Financial Crisis and overall, it may be the second - largest decline since the German unification in 1871. With regard to Germany's entire economic year 2020, the International Monetary Fund forecasted a shrink of -7.0 percentage points which would even be a sharper decline than the one caused by the financial and economic crisis in 2009 when the German GDP had a negative growth of -5.69 percentage points compared to the previous year (Gopinath, 2020a; ifo Institute, 2020).

Figure 3-1: Development of the Gross Domestic Product in Germany



Source: Statistisches Bundesamt, 2020

As an open economy Germany is particularly affected by the current development. The reason for this is the following: As a result of being an export nation Germany's economy is tightly integrated into global value chains. Thus, the country's vulnerability of the pandemic's economic impact is particularly high as the German economy is dependent on how the global economic course is shaped, with special regard to the Eurozone. According to the press release Nr. 206 published in June 2020 of the German Federal Statistical Office, in April 2020 the country's export value declined by -24.0 percentage points compared to the previous month and is -31.1 percent less than the figure of the same month in 2019. In fact, this export collapse was Germany's "[...] strongest month – on – month decline after calendar and seasonal adjustment since August 1950" (Statistisches Bundesamt, 2020e). In addition to this strong decline in exports, German imports are also decreasing. Based on calculations of the Federal German Statistical office, German imports of April 2020 fell by -26.6 percent compared to the same month in 2019.

Moreover, the Corona pandemic has a huge impact on the German labour market which mainly becomes visible by a rise in the unemployment rate and an unprecedented level of short – time working arrangements. In the end of quarter 1 of 2020 the number of unemployed German persons rose by +308,000 in March to a total number of 2,666,000 people in April 2020. As a result, these are 415,000 more unemployed persons compared to the previous year. Thus, the unemployment rate among the total population has risen to a value of 5.8 percent in April 2020 which constitutes a rise of 0.9 percent compared to the figures of April 2019 (Bundesagentur für Arbeit, 2020b). With regard to short – time work requests one can say that "only" from the beginning of March until the 26th of April 2020, 751,000 reports for up to 10.1 million employees have reached the German "Agentur für Arbeit". In fact, this figure even exceeds the number of reports that have been submitted during the Financial Crisis of 2009 when the "Agentur für Arbeit" received reports for 3.3 million people throughout the entire crisis year of 2009 (Bundesagentur für Arbeit, 2020a). This disproportionate difference reveals the graveness of the lockdown's macroeconomic consequences. Nonetheless, it is important to state that short – time work is an important labor – political instrument that has prevented a large wave of redundancies, prevents unemployment, secures work and thus, stabilizes the labour market. Nonetheless, according to data provided by the German Federal Employment Agency the German

unemployment rose from 2,335,000 people in March 2020 to 2,955,000 unemployed people in August 2020. Despite the applied labour political instrument of short – time work, until August 2020 the unemployment rate climbed to 6.4 percent which is compared to August 2019 an increase of 1.3 percentage points (Bundesagentur für Arbeit, 2020a). In addition, unemployment threatens to further increase if companies cannot balance their sales losses.

Another grave macroeconomic consequence of the Great Lockdown is the high increase in government debt. As a result of the high expenditures of the government, the German Ministry of Finance calculates a deficit of -7.25 percent of GDP by the end of 2020 (Federal Ministry of Finance, 2020b, 22). In contrast to this, in the previous economic year Germany had a surplus of around 1.45 percent of GDP. It is important to state that in recent years German government kept its finances in check as in 2019 it was able to reduce its debt to GDP ratio by 2.1 percentage points to 59.8 percent which corresponded to the Maastricht criteria. Due to this, from a fiscal policy's point of view, Germany might be in a relatively strong position to handle the upcoming economic crisis (Federal Ministry of Finance, 2020, 3). Nonetheless, according to the calculations of the German Ministry of Finance, the general government debt – to – GDP ratio will increase to 75,25 percent by the end of 2020 (Federal Ministry of Finance, 2020b, 5). In terms of the government's investments of 2020 the Federal Ministry of Finance states that these will result into a total volume of €453 billion and thus, the German government "[...] is implementing the largest – assistance package in the history of the Federal Republic of Germany" (Federal Ministry of Finance, 2020b, 3).

Moreover, the pandemic causes a reaction of the German capital and stock market. As one can clearly depict from Figure 4 the major decline of the DAX index has taken place from the middle of February until the middle of March as there was a strong decrease of the DAX index from 13,681.10 index points on 12th of February to 8,928.95 points on 25th of March 2020.

In order to cope with the financial crisis, the central banks are boosting measures to support liquidity and funding conditions (Obertreis, 2020). The European Central Bank (ECB) already increased the volume of its bond purchases to 118.8 billion euros until the first of May 2020. Overall, the ECB's crisis program "Pandemic Emergency Purchase Programme" (PEPP) is designed to have a volume of 750 billion euros by the end of 2020 (Siedenbindel, 2020). At the same time, the German government intervenes in the market with an unprecedented, historically unique bailout package of three-digit billion euros to support companies. Thus, the capital market is turning again, with fluctuations, but the index value is going up steeply. In the beginning of June, further 600 billion from the ECB were released for additional bond purchases and the German government agreed on a "Corona economic stimulus package" of further 130 billion euros (Federal Ministry of Finance, 2020a). As a result, since the low point of the DAX index in the middle of March 2020 the index has highly risen and therefore seems to be in a period of recovery from then on. Until the 23rd of August 2020 the index value increased again to 12,586 points and by October, 16 2020 he reached 12.909 points.

Figure 3-2: Development of DAX index



Source: Trading Economics, 2020

However, the future will show whether the capital market participants are right in their optimism about a rapid and sustainable economic recovery. The risk of a second lockdown which would probably hit the economy hard again as well as possible problems in international supply chains seem to be ignored.

3.1.2 Meso level

In the following, the pandemic's impact on the German economy will be analyzed from a meso level. In the middle of May 2020 the Ifo institute published first results of a survey among 322 German managers with regard to questions whether and to what extent the pandemic and the restrictions of public life influence German economy as a whole as well as their own business activities. On average, the interviewed managers act on the assumption that the pandemic is going to have strong effects both on global economy and on German economy. Almost nobody is only expecting "a mild recession" (Demmelhuber et al., 2020, 2). With regard to the Lockdown's impact on their own company, almost 80 percent of the 322 interviewed managers reported negative effects on their current business situation. When it comes to the development of their sales 85 percent of the company heads calculate a loss of revenue whereas 5 percent expect an increase in sales and 10 percent do not anticipate any changes. This distribution of different expectations leads to an average expected change in sales of -21 percent. Nonetheless, the majority of these interviewed 322 German managers does not yet consider a high probability of a plant and office closure as from a scale from 0 (improbable) to 5 (probably) they expect an average probability of 1,9. In terms of the development of the number of their employees, the Ifo institute's survey detects that 50 percent of the respective managers expect a stable

number of employees but almost the same share of managers (48 percent) plans to reduce staff. The necessity of reducing staff highly depends on the industry and size of the company (Demmelhuber et al., 2020, 3).

In addition to this, at the end of March 2020 the Association of German Chambers of Industry and Commerce (DIHK) interviewed 15,000 German companies with regard to their expectations about how their business will be impacted by the coronavirus. According to this survey, the main expected consequence of the pandemic for the own company is less demand for their products and services since 63 percent of the interviewed German enterprises stated to expect this consequence. In addition, to the main impacts belong a cancellation of orders (48 percent), a standstill of business activity (43 percent), liquidity shortfalls (41 percent) and reduced investments (38 percent). Only 2 percent of these 15,000 German companies stated to not expect any impact of the coronavirus in the upcoming weeks. In addition, the above-mentioned survey of DIHK also analyzed the company's expected extent of their loss of revenue. Accordingly, 26 percent of these 15,000 surveyed German companies expect a decline in revenue of more than 50 percent in 2020. In addition, 26 percent of these companies calculate a decline between 25 and 50 percent and 23 percent of the 15,000 German enterprises anticipate a decrease of 10 to 25 percent (Nothnagel/Vogelbach/Heidenreich, 2020, 3 f.).

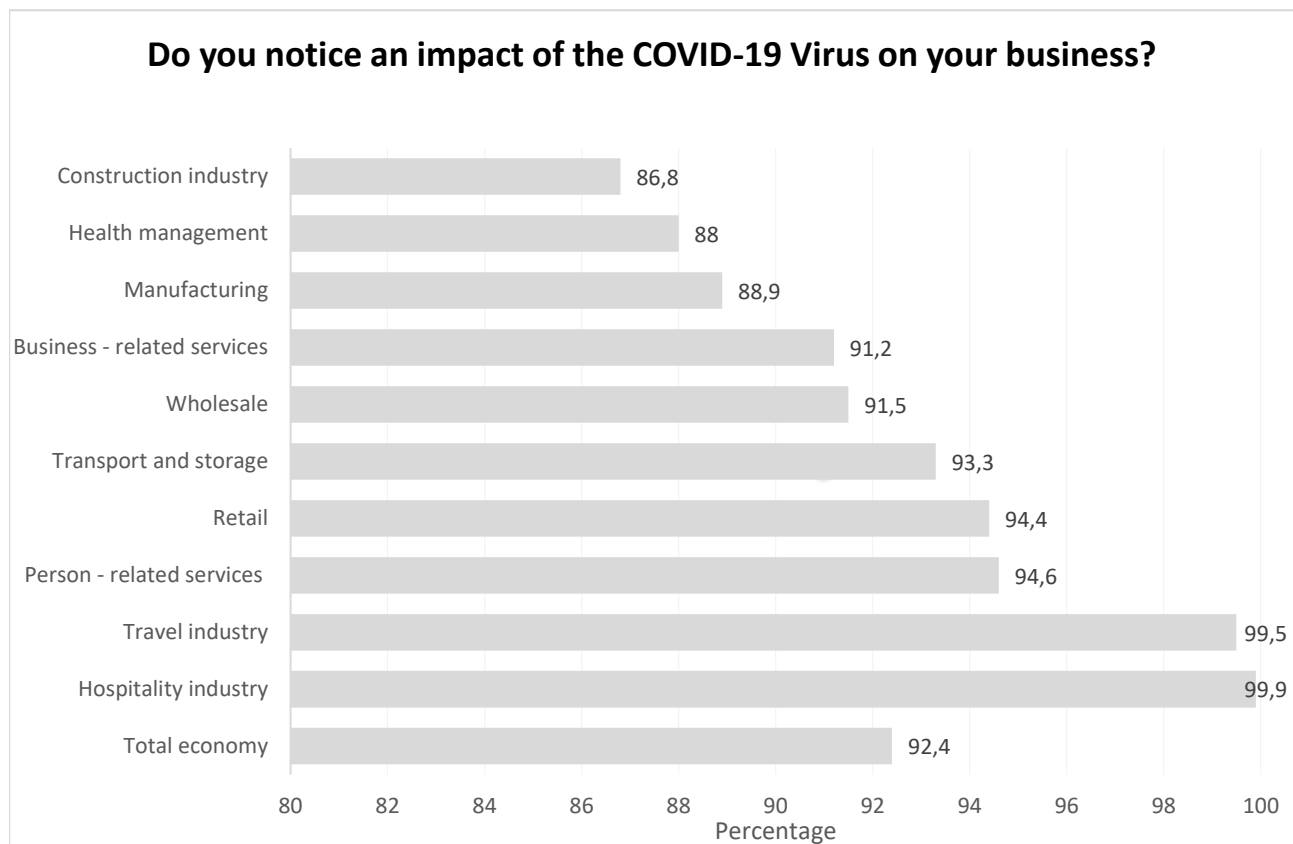
In addition to the domestic business activities, the current crisis also has an impact on German companies' foreign trade and investment as the business of German companies abroad is strongly restricted by the development of the pandemic. According to a survey of more than 4,000 interviewed German companies and subsidiaries abroad which was conducted by the German Chamber of Industry and Commerce (DIHK) and the German Chambers of Foreign Trade (AHK), 80 percent of interviewed German enterprises abroad expect a decrease in sales. In addition, more than half of the surveyed German companies abroad (58 percent) expect a declining demand while 47 percent of them anticipate investments to be postponed or cancelled. In addition, one third of the interviewed companies expect liquidity bottlenecks caused by the pandemic. Another important insight is the fact that a high share of German companies worldwide (69 percent) stated that travel restrictions negatively influence their business and almost half of them are affected by cancelled events, trade fairs and orders (Nothnagel/Vogelbach/Heidenreich, 2020, 5). For these reasons, the measures to contain the spread of the coronavirus are posing German domestic companies as well as German International enterprises to a multitude of challenges.

3.1.3 Companies and branches, negatively affected by the Crisis

Based on assumptions of the Ifo institute, the national lockdown has consequences for almost all German economic areas. Nonetheless, there are differences in the extent of the impact. In the following, the industries that particularly suffer under the COVID-19 pandemic will be presented. Figure 5 shows additional results of the above - mentioned survey of the German Chamber of Industry and Commerce (DIHK) which was conducted in March 2020 and included 15,000 German companies. These results refer to the question whether these companies already (End of March 2020) notice an impact of the coronavirus on their business. First of all, due to the high share of 92.4 percent for the total economy one can state that from the beginning of the crisis

on a major part of German economy was affected. As one can additionally depict from this figure, already in the end of March 2020 which was only the beginning of the Great Lockdown almost 100 percent of businesses in the hospitality industry noticed an economic impact of the coronavirus on their business. In addition to this, 99.5 percent of companies within the travel industry stated that they already notice the impact of the pandemic (Nothnagel/Vogelbach/Huhn/Heidenreich, 2020, 3). Thus, to the earliest and in general most affected economic sectors belong the travel and hospitality industries.

Figure 3-3: Coronavirus impact on German companies



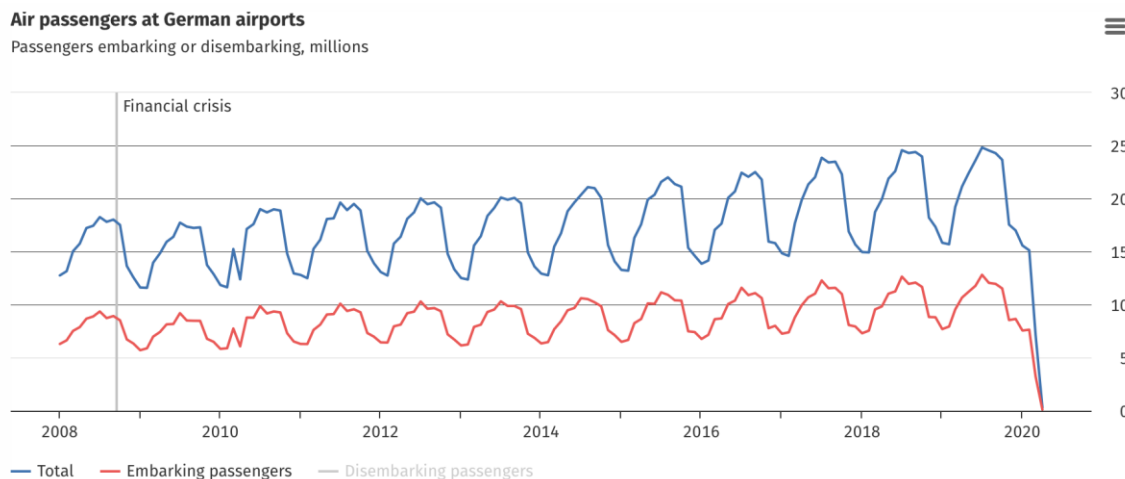
Source: Own representation based on a survey of DIHK, Nothnagel, 2020, 3 in March 2020

Additionally, this insight can be proven by a survey which was conducted by the German Hotel and Restaurant Association (DEHOGA) in March 2020. According to this survey, almost half of overall 9574 interviewed companies from the hotel and hospitality industry (45 percent) stated to have recorded losses between a range of 10,000 to 50,000 euros. One tenth of these companies declared a revenue loss of 50,000 to 100,000 and 8 percent of them state to have a loss of 100,000 to 500,000 euros (Heckel, 2020, 1).

Moreover, the pandemic has strongly hit the travel industry, particularly the German airlines. As Figure 6 clearly shows, the total number of air passengers at German airports declined in a very extreme way in 2020. According to the calculations of the Federal Statistics Office, in March 2020 there were 12.1 million less air passengers compared to March 2019 when there were 19.2 million passengers recorded (Statistisches Bundesamt, 2020b). As one can see in Figure 6,

both the number of embarking passengers as well as the total number of flight passengers decreased in an extreme way. A prominent example of a German airline particularly suffering under the crisis is “Lufthansa” as the company recorded to have an operative loss of 1.2 billion euros for the first quarter of 2020. Only in March 2020 the revenue of the company fell by 47 percent (Koenen/Ophüls, 2020). In May 2020 only 3 percent of the company’s planned flights could take off.

Figure 3-4: Development of number of air passengers at German airports



Source: Statistisches Bundesamt, 2020b

In addition to the hospitality, travel and tourism industries there are a few more economic sectors and business areas that highly suffer under the measures taken to contain the virus. One example are organizers of major events such as fairs or conferences. According to a company data collection published by “Deutscher Fachverlag”, until June 2020 in Germany a number of 219 trade fairs were entirely cancelled and 308 were postponed to another date (Appel, 2020). More examples of highly suffering event organizers are arrangers of big sport events such as football games and musical events such as concerts.

Moreover, cultural providers such as theatres or cinema owners are strongly impacted. Further “losers of this crisis” are owners of clubs who, indeed, meanwhile started to rebuild and re – open but they were and partly are still fighting for their economic survival as their prospects of a normal club operation are very slim since parties and big events are so – called “Coronavirus – hotspots” which means that the virus is easily and quickly transferable. Another strongly affected industry is the banking sector since banks try to financially help consumers by deferring loans and interest – free overdrafts even though they are weakened themselves as they are in a situation of having unchanged high operating costs and a declining revenue at the same time (Breinich-Schilly, 2020).

Due to a loss of collections and a decreasing customer demand suppliers of fashion articles are also highly suffering under the crisis. Collections that could not or could only partly be sold in the spring season, can only be sold with discount in the next season. Not only the fashion industry but in general many retail companies are complaining about a decline in demand as

households remain risk averse which results into a downturn in demand. The reason for this is simple: Those who do not earn anything cannot spend anything either and the result of this process is an economic recession. One example is the automobile industry. Who buys a car in such uncertain times? In addition, as high – priced goods are partly only purchased through consultation, retailers of luxury goods are also affected in a strong manner. In general, companies that were not able to distribute and sell their products online and could not adapt their distribution channel highly suffered a loss of sales during the Great Lockdown in 2020. In addition, companies that depend on logistics and delivery services are highly affected by the pandemic's measures. In this context, another important aspect to consider is the global supply chain disruption which has serious negative consequences for German companies with global supply chains (Koerth, 2020).

3.2 Companies and branches, profiting from the Crisis

Even though most German companies suffers under the measures to contain the outbreak of the coronavirus, there are a few economic sectors that benefit from the crisis and therefore could be called "The Winners of Corona crisis". One example are videoconferencing and collaborations tools or providers of platforms for cross – location collaboration such as Zoom, Microsoft and Facebook. As a result of the rapidly increasing demand for home - office as well as a rising demand for personal networking with friends and family the abovementioned companies gained popularity and turnover. In Germany 17 percent of all internet users have tried video telephony for the first time during the Corona lockdown (Grollmann, 2020). Both the younger as well as the older generations have seen their colleagues, friends and family more often via Zoom and Skype than in real life during the Great Lockdown. This is a trend that has generated the video conferencing company "Zoom" a big growth. While the number of daily video conference users was "only" 10 million last December, in April 2020 there were 300 million daily users. As a result of this increasing demand, in the first quartal of 2020 the company's turnover tripled to almost 330 million US dollars (Lawler, 2020). No other video conferencing provider has been able to profit that much from the Corona crisis - neither Apple, nor Microsoft nor Facebook. In addition to this, providers of cloud resources such as Amazon AWS, IBM and Google as well as streaming digital download services are pleased about an increase in demand. "Stay at home" - providers such as Netflix also benefit from the global pandemic (Koerth, 2020).

Another winner of the crisis are online traders. The reason for this is the trend that a huge part of the demand was redirected to online trade since in addition to the common online products also parts of rather unregular product areas such as food, drugstore articles and medical supplies were increasingly purchased online. However, it is important to consider that the pandemic does not exclusively lead to positive consequences for online traders. One extreme example is Amazon whose sales increased by 26 percent (compared to 1 year earlier) to a value of \$75.5 billion in the first quarter 2020. The number of products shipped by Amazon increased by 32 percentage points in the first quarter. As a result of the increasing demand, the company hired around 80,000 more warehouse workers in March and additional 95,000 employees in April 2020. However, despite this high increase in sales Amazon's profit fell by 29 percentage points as the company's cost of meeting the boom in demand is also increasing which is due to a decline in warehouse efficiency and expenses for COVID-19 tests for the workforce. According to

the company's chief executive Jeff Bezos the company would expect an operating profit of \$4 billion in the next quarter but "[...] 'Instead', he added, 'we expect to spend the entirety of that \$4 billion, and perhaps a bit more, on Covid – related expenses getting products to customers and keeping employees safe' [...]" (Weise, 2020).

In contrast to this, a real winner of the crisis is the pharmaceutical industry as it experiences a high increase in demand, sales and profits at the same time. To this industry belong pharmacies and drugstores as well as pharmaceutical and biotech industries who currently compete in a race for the vaccine of COVID-19. In addition, disinfectant manufacturers and manufacturer of protective clothing also experience a rise in demand. Lastly, the Great Lockdown has created an increasing customer demand for everyday articles since people started panic – buying and hoarded food products and items like toilet paper out of emergency. As a result of the initial increasing demand for these products retailers like supermarkets experienced an increase in sales at the beginning of the crisis (Koerth, 2020).

To sum up the economic consequences of the global COVID-19 pandemic, one can clearly state that the Great Lockdown of 2020 has challenged and is still challenging German economy as well as the whole world in a historical unique way. Even though the final extent of the crisis' impact is not yet clearly predicable it is already foreseeable that the measures against the outbreak of COVID-19 will have long – term economic consequences even after the virus has been overcome. Without doubt, the stress factors for the German economy are high. As a result of the world trade shrinks, decrease of German GDP, rise in unemployment and collapse of corporate profits a dramatic economic recession of the German economy is inevitable and the pandemic will further cause a slowdown of the economy despite aid packages of the German state. In order to promote sustainable growth a stable political system and European as well as International cooperation is highly required (Felbermayr/Görg, 2020, 4 f.).

3.3 Social psychological consequences

Nonetheless, the Great Lockdown of 2020 does not only have an economic impact. At the same time, the Corona crisis appears as an individual psychological stress test. The social psychological consequences caused by the strict measures against the outbreak of the virus will be elaborated in more detail in the following passage.

3.3.1 Depressions and suicidality

The strong restrictions imposed by the government undoubtedly had a major impact on the human psyche. Even though each individual experiences this emergency situation differently and can handle an isolation situation either better or worse, there exist a few common effects of quarantine on mental health and some regular potential stressors. First of all, a distinction must be made between stress factors that appear during quarantine and post – quarantine stressors which are long – term psychological consequences (Brooks et al., 2020, 916). To the typical initial symptoms during quarantine belong feelings like boredom and frustration which mainly result from the loss of the all – day life and usual routine. An additional factor that can lead to these two side effects of quarantine is the reduced or entirely cancelled social and

physical face to face contact with other people. Even though the term “Social distancing” might not be entirely correct as during the lockdown there was still the possibility to virtually communicate and interact with friends and family, nonetheless, at least a sense of isolation is not uncommon during a quarantine. The situation of not being able to take part in usual all – day activities such as shopping, going for dinner in a restaurant or having a coffee in one’s favorite café leads to additional frustration in people’s mind.

Another typical side effect of quarantine is the feeling of loneliness. Especially for singles or older widowed people, in general 1 person households, the risk of this quarantine symptom is relatively high. In addition, it is important to emphasize that human beings have certain basic needs and social contact is one of them which is necessary to be satisfied. Moreover, quarantined people can be controlled by feelings of confusion and anger such as the fear of infection. Nonetheless, a recent study which was conducted in May 2020 by infratest dimap, a German survey institute specialized in political opinion and election research, confirms the contrary as the main part of interviewees (46 percent) responded to the question “How great is your fear of an infection with the coronavirus (COVID-19)?” by the answer “less big” and 28 percent of participants indicated the possible answer “small”. Only 7 percent of participants stated to suffer under a big fear of infection (Infratest dimap, 2020b, 2). Based on the current state of virologic knowledge, the pathogen SARS-CoV-2 represents a danger of a serious course of disease especially for older people and people with pre – illnesses. Therefore, these society groups are particularly affected by the aforementioned fear. An additional fear of not having access to regular medical care and hygiene products such as protective masks and disinfections can be an additional source of anxiety.

In Germany, especially in the beginning of the crisis there was a high difficulty of delivery of these mentioned products and the absence of access to these products created feelings of fear and uncertainty. According to the “Akkon’s population study on the behavior, experience and opinion of German population in the Corona crisis”, more than 90 percent of 4,500 German respondents experienced more empty shelves than usual and 80 percent felt that more products were sold out than usual (Goersch and Knuth, 2020, 7). In addition, people in a national - wide quarantine tend to complain about inadequate information. Insufficient guidelines about the measures and actions to be taken during the attempt to contain a virus can lead to feelings of confusion (Brooks et al., 2020, 916). Even though this problem might have existed in other countries, the German society seems to generally be satisfied by the way of communication of German government and its political decisions. This hypothesis can be proven by the above - mentioned study by infratest dimap which was conducted from 04th until 05th of May 2020 and included 1,005 German eligible voters. According to their study, the population’s satisfaction with the government was in the beginning of May higher than ever before in this legislative period. The survey shows that 67 percent of respondents are satisfied or even very satisfied with the general work of the German coalition (Infratest dimap, 2020a). With regard to the measures ordered by the government such as quarantine, the closure of public facilities and the cancellation of events, 65 percent to 80 percent of the surveyed people feel well or very well informed by the German government (Goersch and Knuth, 2020, 8). Thus, stressors like a lack of clarity with regard to the pandemic or a lack of transparency on the part of health and government officials could be minimized in Germany.

Despite the overall contentment with the German government's crisis management there are more negative psychological side – effects that emerged during quarantine and even remained after the end of the Great Lockdown. As analyzed in chapter “3.1.1. Economic consequences”, the national lockdown resulted into an increase in unemployment, an unprecedented level of short – time work and many companies are threatened by insolvency as they cannot cope with the sales losses forever. These so – called “Post – quarantine” stressors such as financial loss and existential fear are long - term problems which can result into a depression or in the worst case into suicidality. Many studies reveal that “[...] the financial loss as a result of quarantine created serious socioeconomic distress and was found to be a risk factor for symptoms of psychological disorders and both anger and anxiety several months after quarantine” (Brooks et al., 2020, 916). Thus, the psychological effect of financial worries can be long – lasting. In addition to the financial aspect of work, employment gives people a regulated daily life which prevents boredom and feelings of uselessness.

The Corona crisis particularly hits German self – employees with special focus on solo self – employed people. Even though many of these self – employees were pleased to quickly get financial help from the government, many of them did not receive enough money to cover their ongoing expenses. According to a survey of the Mannheim Centre for European Economic Research (ZEW) which was conducted in the end of May 2020 every fourth German self – employed soloist sees a high probability of being forced to give up within the next year (Bertschek/Erdsiek, 2020, 1).

As the future is currently very uncertain, many German entrepreneurs and especially the soloists are therefore threatened by insolvency. Despite potential high levels of courage and braveness, the economic crisis will result into a serious life challenging task for many entrepreneurs. As a result, people that are exposed by existential fears are far more threatened for post – traumatic stress and depressive systems than people who are not. However, even before the times of Corona, depression and suicidality was an issue in Germany. According to a survey conducted by the German Robert – Koch institute 65 percent - 90 percent of suicides in Germany are caused by mental illnesses, mostly by depression (Wittchen/Ryl, 2010, 25). Based on data provided by the Federal Statistical Office in 2017 a total number of 10,080 people died from suicide (Statistisches Bundesamt, 2017c, 32). As people are now increasingly struggling with the above - mentioned psychological problems, mainly caused by isolation, existential fears, short – time work, unemployment and insolvencies, the risk of an increase of suicide rates is unfortunately existing.

3.3.2 Domestic violence

Nonetheless, depressions and suicidality are not the only social – psychological consequences of the Corona crisis. Due to the lockdown, the extent of domestic violence in Germany has risen sharply. Domestic violence, also called intimate partner violence (IPV), includes physical, sexual and psychological forms of violence. According to a criminal statistics evaluation on partnership violence of the German Federal Criminal Police Office, in 2018 a total number of 140,755 German people became a victim of partnership violence. The fact that 114,393 of these victims were women shows that the female share clearly predominates (Bundesministerium für Familie,

Senioren, Frauen und Jugend, 2020). As a result of this extreme high female share it might be obvious that in particular for women the Corona crisis has the potential to turn into a personal nightmare.

Even before the Great Lockdown experts anticipated that the cases of domestic violence might increase. However, violent crimes within the family are only rarely reported in Germany as many victims feel ashamed or their partners manipulate them until a police report is prevented. Since only very few assaults end up in court and the number of unreported cases is high, it is not possible to make an exact estimation of the development of domestic violence during the Great Lockdown 2020. Nonetheless, a representative study conducted by the Technical University of Munich (TUM) found out that 3.1 percent of 3,800 female participants aged from 18 to 65 years stated to have experienced at least one physical attack during the strict contact restrictions. Financial fears in the family and depressions of the partner seem to reinforce the risk of domestic violence as 8.4 percent of surveyed women stated to have suffered under domestic violence as a consequence of financial worries and 9.7 percent of these women became victims of violation when the partner had a depression (Steinert/Ebert, 2020, 1 f.). Another potential reason for a rise in domestic violence during quarantine could be the constant situation of staying together and being locked up at home which prevents the possibility to avoid each other in partnerships. Additional stress factors might be the not existing possibility of being able to go out, pursuing hobbies and meeting with friends. Lastly, the situation of closed kindergartens also increased the stress level and conflict potential in families. A potential close connection between the Corona crisis and a recent increase in domestic violence can be proven by the enormous increase in demand for women's shelters and a rise in the number of requests for advice. However, in Germany women's shelters were already heavily overloaded even before corona times. In order to change this situation of missing places, the Federal Government has made 120 million euros available for the expansion of counselling centers and women's shelters (Bundesregierung, 2019). Especially during the Great Lockdown affected women only hardly had a chance to escape from their tormentors and therefore, victims of domestic violence must be supported to have the courage to seek help and to dare to say something by themselves.

To conclude the above - mentioned insights, it must be stressed that the social – psychological impact of quarantine is wide – ranging and can be long – lasting. It starts with symptoms like boredom and loneliness, a stress test for families and partnerships and goes up to domestic violence, existential fears and depressions that in the worst - case end up into suicide. Therefore, depriving people of their freedom is a difficult and sensitive subject and needs to be handled carefully, respectfully and responsibly. “The potential benefits of mandatory mass quarantine need to be weighed carefully against the possible psychological costs. Successful use of quarantine as a public health measure requires us to reduce, as far as possible, the negative effects associated with it” (Brooks et al., 2020, 912).

3.4 Ethical challenges

As a result of the economic and social – psychological consequences, the Corona crisis initiates a conflict of interest between economy, health and ethics. The core ethical conflict consists of the challenge of ensuring a permanently efficient health care system but at the same time trying to minimize the serious economic and social – psychological side effects for the population by the measures taken and lastly, the stability of the social system also must be guaranteed. The crisis provokes a discussion about legality and moral legitimacy of the current measures and a conflict between lockdown and relaxation. Were the implemented measures compatible with the German Basic Law and which ethical dilemmas arise out of this situation? The following part will answer on these questions by analyzing the crisis' ethical challenges from a social - ethical and a medical – ethical perspective.

3.4.1 Social – ethical point of view

3.2.1.1. Fundamental rights

Many measures that were taken from the government to contain the coronavirus restricted people's fundamental rights. First of all, the legal basis for the strict measures against the outbreak of the virus is the Infection Protection Act (IfSG) which defines in which rights, especially fundamental rights, the state may be allowed to intervene and to what extent. In particular, paragraph 28 of this act is used to issue various initial restrictions and general rulings. Moreover, according to paragraph 32 IfSG, the Federal States are allowed to issue their own protective measures in the form of legal ordinances, on the basis of which basic rights may be restricted. The civil protection law of the Federal States offers the possibility to take certain measures once a catastrophe has been declared. Nonetheless, it is important to state that even in this emergency situation the state is only allowed to interfere in the citizen's fundamental rights if this is proportionate. The following applies: The deeper the intervention on fundamental rights, the higher are the requirements for the justification of the restrictions (Podsadny, 2020). Thus, the general statement "Everything serves the protection of health" is in any case little viable as a sole explanation. Moreover, it is also important to note that independent whether the government's decisions were ethically right or wrong, legally correct or incorrect, these strong restrictions of fundamental rights have not yet been exercised to this extent and are therefore unique in the history of the German Federal State. Because of the government's as well as citizens' inexperience with this catastrophic situation, it is highly necessary to clearly evaluate whether the adopted measures are suitable, necessary and reasonable. As the measures taken by means of strict contact restrictions are directly linked to a reduction of the number of infections, it can be stated that they are suitable for preventing a rapid spread of the pandemic and were therefore necessary to save many lives at the beginning of the pandemic. Nonetheless, when it comes to the reasonableness an important and highly discussed point comes into play as one has to evaluate how long these restrictions and what kind of measures can be tolerated. In summary, the emergency situation in March and April 2020 encroached on seven different fundamental rights. First of all, as a result of the measures taken by the government, people's general freedom of action which is documented in Article 2 (1) of the German Basic Law was highly restricted. This right generally allows citizens to do anything that does not affect the right

of others. Already with the first closures of shops this right became limited for both the owners themselves as well as for customers who are, in normal conditions, entitled to visit shops.

The contact restrictions which caused a ban on meeting with friends and family additionally limited the general freedom of action. As public demonstrations were temporarily prohibited, the right to freedom of assembly which is based on article 8 of the Basic Law is another example of a restriction on fundamental laws. Moreover, people's right to freedom of occupation (Article 12 (1) of the Basic Law) became highly restricted as many companies were forced to close or compulsorily prescribed working via home office during quarantine which represents an intervention of this right. In addition, during the Great Lockdown German citizens were not anymore able to freely move within the Federal Republic. Even though in Germany during the period of strict quarantine people were still allowed to leave the own home for going to the doctor or to the supermarket as well as to go for a run or for a walk, the right to freedom of movement (Article 11 of the Basic Law) was restricted anyway as it was not anymore possible to travel to other Federal States (Kendzia, 2020). In this context, an example are the Federal States "Schleswig-Holstein" and "Mecklenburg - West Pomerania" who temporarily did not allow guests or tourists to enter their regions. As an example, if a family from North Rhine-Westphalia wanted to visit their vacation home located at the Baltic Sea in the Federal State of "Mecklenburg - West Pomerania" this was legally forbidden during quarantine. People in this situation were therefore limited in their right to guarantee of ownership which is documented in Article 14 of the German Basic Law. And the current debate on travel bans, the quarantine rules for travelers or the plea of chancellor Merkel to stay at home show the complexity of the situation and the need for a broad discourse, since no one knows the best way to deal with the pandemic crisis.

Moreover, under normal conditions, the own flat or own house can only be searched by another person provided by the law (e.g. a police chief) in case of imminent danger or by the order of a judge. During the exceptional emergency situation of the Great Lockdown this situation was different as in times of quarantine a public health officer was allowed to enter the home of a presumably infected person in order to examine him or her. Therefore, the state limited another fundamental right which is the right to inviolability of the home (Art. 13 (1) of the German Basic Law). Nonetheless, the above described case of the doctor might be justified as by prescribing such control measures the state wants to protect the right of third parties to life and physical integrity which is a right that according to the government's notion of importance weighed more heavily than the inviolability of the presumably infected person's home (Kendzia, 2020). Lastly, the strict measures imposed by the government also affected German churches, mosques and synagogues and finally resulted into a temporary closure of these facilities. Therefore, the right to freedom of religion which is documented in (Article 4 (1) and (2) of the Basic Law) is another example of a restricted fundamental right during the lockdown (Kendzia, 2020).

All in all, one can say that the citizen's restrictions of fundamental rights during the Great Lockdown of 2020 were enormous and the extent of limitations is historically unique in the German Federal Republic. However, according to the German Ethics Council, the restrictions on freedom to combat the corona pandemic were justified but they should be continuously reviewed for their consequences. Further plans and strategies for a comeback to a "normal" social and private life and regular economic activities, also known under the term "New normality", must be

made in order to keep the negative economic and social – psychological consequences to a minimum (Sharpe, 2020, 5). The pandemic development remains unclear and unpredictable – and staying at home for 6 months until next summer is for most people not an option.

3.2.1.2. Data privacy

In addition to the above - mentioned restrictions and limitations of people's fundamental rights, data privacy is another sensitive and highly discussed topic with regard to ethical challenges in the Corona crisis. An exemplary question that arises in this context is whether mobile phone providers are allowed to simply pass over mobile phone data to public health institutions and if so, how does it affect people's privacy?

As an example, the German mobile phone provider "Deutsche Telekom AG" has provided the Robert Koch Institute (RKI) with telecommunications traffic data that was used in order to track the movement of mobile users. First of all, based on the German Basic Law (Art. 2 para. 1 in conjunction with Art. 1 para. 1) and the European Charter of Fundamental Rights (Art. 8 para. 1) people's right to informational self - determination is protected. In addition to this, there is currently no legal basis in the protection against Infection Act (IfSG) which could oblige private companies such as mobile phone providers to provide personal transaction data. The decision of "Deutsche Telekom AG" in March 2020 was a voluntarily one in order to support the RKI in its efforts of containing the pandemic. However, whether the transmitted data was truly anonymous or not remains questionable (Podsadny, 2020).

Another important ethical questionable issue in this context is whether the German government is obliged to collect movement profiles from mobile phone data in order to identify contact persons of infected people. In order to further contain the virus by analyzing the infection chains in a more precise way, German politicians have proposed a voluntary mobile phone tracking via an application, the so – called "Corona-App" which was already in discussion during the Great Lockdown and was finally introduced to the public in June 2020. This application's function is to inform people who had contact with a corona sufferer and if necessary, they will be warned by a push message so that they are informed as soon as possible, can be tested and in turn, one can prevent them from infecting others by quarantining them (Buermeyer/Abeler/Bäcker, 2020). Thus, this method contributes to a faster contact tracing and at least from an epidemiological point of view, the function of this application is therefore justified.

However, the question raises how such a "Corona-App" used for the identification of high - risk contact is to be evaluated from an ethical perspective with regard to data protection? From a philosophical and ethical position, this measure seems at first to be completely disproportionate as both people's general freedom of action which is documented in Article 2 (1) of the Basic Law as well as the right to data privacy seem to be highly disrespected. However, an evaluation of such a method of contact tracing highly depends on whether the application is a voluntary one or a compulsive one and it also depends on which kind of data is used, collected and stored.

Nonetheless, this situation appears to be a weighing – up process between weakening data protection and the far – reaching restrictions to personal freedom and economic cost of the lockdown. Therefore, the best – case scenario would be to find a possibility to track contacts quickly

and efficiently and without the need to collect a huge amount of sensitive data in a central database. The European consortium PEPP - PT is following a concept of an application that promises exactly this. The fundamental idea is to entirely forego on sensitive data such as GPS or radio cell data which might be neither reasonable and acceptable in terms of data protection nor necessary or useful. Instead, the proposed concept is based on a Bluetooth low energy technology which is able to record when two mobile phones are in close physical proximity. Infection chains can be better followed but the entire process is anonymous as neither the other users nor the local health authorities and not even the central server learn the identification of the user. According to the founders of this application, location data is neither recorded nor stored at any point of time of the process (Buermeyer/Abeler/Bäcker, 2020).

Lastly, it is important to underline that such a “Corona-App” must be created as ethically justifiable, reasonable and secure as possible as the success of any contact tracing system highly depends on public support. The higher the data minimization, the more acceptance of the application can be anticipated and the more people participate, the more efficient, promising and more useful is such an application. “Only if people trust a system – because it doesn’t spy on them – will the system find broad support in the population” (Buermeyer/Abeler/Bäcker, 2020). To sum up, one can state that it is particularly important to find solutions that minimize data processing as much as possible in order to both protect the right to data privacy and to increase effectiveness and efficiency of the possible data processing system.

3.2.1.3. Equality of opportunities

In addition to the restrictions of fundamental rights and problems with regard to data privacy there are more social – ethical challenges that are caused by the current crisis. Closed kindergartens, homeschooling and “Corona A – levels”, is this the end of equal opportunities?

In Germany, the younger generation is particularly affected by the social aspects of the pandemic. The elderly are more affected by the virus itself, but the so – called “Corona - Generation”, the children of today, are paying the price in forms of gaps in knowledge among these students and pupils. This problem reinforces for weak pupils who are particularly dependent on support. In addition to low - educated children, the ones coming from difficult family situations and low - income households might be more affected as well. Those “children from deprived families” with difficult living and domestic conditions suffer even more as their problems are often recognized in school. Since the daily school life was no longer possible during the Great Lockdown there was a significant threat of youth welfare offices who are not anymore well informed enough in order to act and react to these problems and help children out of their difficult situations. Moreover, the defenselessness of these children must be considered as in contrast to adult domestic violence victims who can call the respective help centers, young children can only hardly defend themselves. Many teachers, especially at secondary and primary schools, are telling stories about how difficult it was during the lockdown to keep in touch with the students who need this contact most. More precise, they report of children who do not do their homework, of parents who do not answer their calls and even of students they have not heard anything since the lockdown. According to the teaching staff, especially in these times of crisis, language barriers and limited digital possibilities in the parental homes become visible. “Children

from deprived families have to go back to school. Otherwise they will be lost to us”, says a teacher of a secondary modern school in Cologne (Munzinger, 2020). Moreover, the crisis shows that not only the parents’ homes but also schools are not sufficiently digitalized (Munzinger, 2020).

In addition to this, the concept of equality of opportunities reaches its limits if one considers the decisions of several Federal States regarding the emergency child - care during the lockdown. While in Hamburg emergency care could be used by all parents and, according to the school authorities, no one had to "justify oneself", other states such as Bavaria, Schleswig-Holstein, Berlin, Mecklenburg-Western Pomerania or Brandenburg offered emergency care only to parents who are employed in so - called systemically relevant professions (Schmoll/Truscheit, 2020). This resulted into the situation that whether a child living in the aforementioned Federal States was about to be soon allowed to play again with friends in the kindergarten depended on whether the parents were considered to be “systemically relevant” and the child itself was therefore indirectly defined to be systemically irrelevant. For example, the doctor’s child could go to the kindergarten but the child from the unemployed parents being systemically irrelevant was temporarily not allowed to play with his friends in the kindergarten. This might be a typical example of limitations of the government’s measures regarding the protection of equality of opportunities.

However, not only the children suffered under the situation. The closure of kindergartens and day – care centers posed a considerable challenge and stress test for families in general and with special regard to the parents. As they had to handle an overload between childcare and their job, another particularly negatively affected social group are young families with children. In addition to this, adolescents and young adults also suffered under the situation caused by the pandemic as the subject of training became associated with anxiety and uncertainty. The reason for this is the cancellation of training places as many companies did not fill training positions which were previously planned to take place. Moreover, as a result of this “Being labelled as the Corona – Generation” the affected adolescents are afraid about later being disadvantaged on the job market (Gillmann, 2020). In addition, as German food banks were temporarily closed the poorer social classes that depend on getting food by these organizations suffered under the existential fear of starving. To sum up, the above - mentioned social groups such as children, young adults, young families and homeless people seem to belong to the socially most affected ones from the pandemic. The principle of equality of opportunities reaches its limitations within the course of the government’s measures to contain the virus.

3.4.2 Medical – ethical perspective

3.2.2.1. Decision – making in case of triage

In the context of the corona pandemic triage is a situation in which there are not enough intensive - medical ventilation units available for all patients and therefore, a hard decision must be made about who will be therapied and has a chance to survive and who cannot be given this possibility. Without doubt, such a decision that must be taken in case of triage belongs to one of the most difficult medical - ethical challenges. In contrast to other countries like Italy, in Germany such a scenario has luckily not yet been experienced as the German healthcare system did not reach a saturation point by now (17. October 2020) and therefore all people who were in need of a respirator received the possibility of such an intensive - medical therapy. Nonetheless, the risk of such a situation in which there are not sufficient intensive care resources for the respective patients that are in strong need of them cannot be entirely excluded, not even in Germany, as the second infection wave has hit all European Countries. Accordingly, the relevance of this medical - ethical dilemma scenario is still high. A high moral difficulty arises as in such cases the medical staff has to evaluate which patient that requires intensive care is to be treated with high priority and who is to be treated as lower priority. This prioritization process might be one of the most tragic and hardest decisions doctors and medical staff can be faced with.

However, a distinction must be made between two different scenarios of triage such as triage in ex – ante competition and triage in ex – post competition. The first one refers to the situation in which the number of unoccupied respirators is smaller than the number of patients that need medical intensive care. Thus, a decision must be made between patients who will get access to the life – saving therapy and patients who cannot be saved from disease – related death for reasons of this tragic impossibility. From an ethical perspective and according to the German Ethics Council this kind of decision – making “[...] should be based on a well – considered, justified, transparent and, as far as possible, uniformly applied criteria” (Sharpe, 2020, 4).

The second potential situation which is called “Ex – post competition” has the same initial situation of insufficient ventilation places but in this case the ethical dilemma is greater as in this tragic scenario the medical staff has to discontinue the life – sustaining therapy of one patient in order to save the life of another patient by reassigning the respective respiration place to the new patient. Both above described scenarios represent an ethical dilemma and moral conflict situation but it might be obvious that “indirectly killing” one patient by disconnecting him from the vital breathing device can result into a borderline situation that is psychologically and morally only hardly bearable for the medical staff being affected by this tragic decision (Sharpe, 2020, 4). Anyway, anyone who is obliged to take such an ethically difficult choice which is to be agreed upon transparent criteria set up by medical facilities, can anticipate exculpatory leniency from the legal system in case of a possible (criminal) legal enquiry of the occurrence (Sharpe, 2020, 4). Nonetheless, in Germany an active termination of an ongoing treatment for the purpose of saving the life of a third it is not entirely legal. According to the German Ethics Council it is particularly important that “[...] Even in times of disaster the state must safeguard the foundations of the legal system” (Sharpe, 2020, 4). In addition, the German Ethics Council stresses

that unfair influences such as a prioritization based on social status, origin, age and disability are to be excluded as far as possible.

However, according to which final criteria do doctors and medical staff then decide and carry out such a prioritization decision if it cannot be avoided? In this context, the German Interdisciplinary Association for Intensive and Emergency Medicine has published some guidelines, decision – making and prioritization algorithms for such an emergency situation which reflect the implied ethical and theoretical justice problems. Specialists and representatives from emergency and intensive care medicine, medical ethics, law and other disciplines were involved in the preparation of these recommendations. First of all, a patient - centered decision basis applies for the decision - making process which means that the indication as well as the patient's will is the first basis for such a decision. In cases such as the beginning of an unstoppable dying process, an unlikely realistic chance of the therapy being effective or if the patient himself consistently refuses a therapy, such an intensive-medical therapy will not take place. In the case of resource scarcity, however, additional decision - making criteria apply which are based on transparent, medically and ethically well - founded criteria for the necessary prioritization (Dutzmann et al., 2020, 3). At this point, the German Interdisciplinary Association for Intensive Care and Emergency Medicine emphasizes that these prioritization decisions are not designed to deliberately evaluate human life or weighing importance of lives against each other. Rather, it is about the obligation to enable as many patients as possible to get access to intensive care with the limited resources available under such crisis circumstances. In addition, the decision basis which will be further explained in the following is intended to relieve the burden on the involved health care personnel and is used to strengthen the confidence of the population for the crisis management in German hospitals. According to the recommendations of the German Interdisciplinary Association for Intensive Care and Emergency Medicine, a prioritization of patients should be based on the criteria of clinical success. Due to the principle of equality (Article 3 of German Basic Law) a periodization is not justifiable only within the group of COVID-19 patients which means that other patients such as cancer patients who are in need of intensive care must be treated equally. Just as the German Ethics Council, the German Interdisciplinary Association for Intensive Care and Emergency Medicine states that prioritization based solely on age or social reasons is unacceptable (Dutzmann et al., 2020, 4).

Under which criteria do doctors and medical staff finally decide in triage situations? First of all, the interprofessional multi - eye team principle applies which means that if possible, two doctors experienced in intensive care medicine, inclusive primary and secondary practitioners as well as, if possible, representatives of nursing and, if necessary, representatives of other disciplines such as clinical ethics are involved in the process. The first step is to assess whether intensive care treatment is necessary. If this is the case, it is checked whether there is a realistic clinical chance of success of an intensive care therapy at the current time or not. If this condition is also guaranteed, it is then examined whether the patient has given his consent. This can either be current, pre - existing, previously expressed or a presumed agreement. If this criterion is also met, a prioritization will be done according to the principle of multiple eyes and two different types of indicators. On the one hand, indicators of low chances of success in initial or re - evaluation will be checked. These include indicators such as the current illness, comorbidities such as chronic organ failure or severe immune deficiency and the general health status.

Subsequently, indicators of previous therapeutic success and resources are taken into account. After this evaluation, the final decision will be taken whether the patient concerned receives an intensive - medical therapy in the intensive care unit or intermediate care unit or whether he or she is transferred to a general ward and will thus, be assigned to a non - intensive medical therapy. In this case, palliative medical treatment always must be guaranteed. Ultimately, a re - evaluation of the intensive care therapy follows at appropriate intervals and in any case in the event of clinically relevant changes in the prospects of clinical success as well as when changes in the relationship between need and available resources suddenly occur (Dutzmann et al., 2020, 3 ff.).

To sum up, decision – making in case of triage, especially the scenario of ex – post competition, is an enormous ethical challenge and represents an extreme difficult and psychological burden situation for the health personnel involved into the decision process. Therefore, there is a high necessity for clear and transparent guidelines in order to enable a reasonable, ethical justifiable decision – making which should, instead of social reasons, rather to be based on clinical success. In the context of the complexity of such medical – ethical decisions the German Ethics Council underlines that “[...] State and society could bear an erosion of these foundations even less than numerous tragic decisions in life and death emergencies.” (Sharpe, 2020, 4)

3.2.2.2. Unconditional protection of human life?

In the context of medical – ethical conflicts and human dignity there has been a debate about an (un-) conditional protection of human life and as a result of this discussion the question raises whether health should and can always be the top priority?

First, Article 1 (1) of the German Basic Law clearly defines that human dignity is inviolable. Respecting and protecting it is the duty of all state authorities. This statement can be related to the ethical theory of deontology, mainly characterized by Immanuel Kant (2.2.1. Deontological Ethics). However, the question raises whether all measures and considerations should be entirely subordinated to the medical goal of protecting people from the virus or whether this statement should not or cannot be applied in its entirety. A public discussion about this sensitive issue of human life and human dignity was triggered by the following quote of the German politician and president of the German Bundestag Wolfgang Schäuble: “[...] but when I hear everything else has to step back from the protection of life, then I have to say: That is not right in its absoluteness. Fundamental rights restrict each other. If there is an absolute value in our Basic Law at all, then it is human dignity. That is inviolable. But it does not exclude the possibility of death” (Schäuble cited by Kruse, 2020). Accordingly, Schäuble seems to be a supporter of careful consideration and weighting – up processes (Kruse, 2020). As the enormous economic, social and psychological impact must also be weighted he demands that important decisions should not only be left to virologists. In fact, human lives are at risk elsewhere and wherever we are at any time in our life there always exists a “general risk of life”. Daily life cannot take place with an entire protection as people can die from accidents, suddenly occurring illnesses and for other reasons. In addition, it must be taken into account that the pandemic threatens to induce grave collateral damages. There is the risk of a situation in which people do not anymore die from corona, the illness itself, but from the side – effects and consequences of it such as

unemployment and insolvencies which can lead to grave depressions and even suicides as already analyzed in “3.1.2. Social – psychological consequences”. Moreover, the measures taken by the government caused a temporal visit ban in retirement homes which had grave consequences for old people as they were isolated and some of them were forced to pass the last time of their lives in loneliness without their families and relatives. Consequently, there was a threat of old people losing the courage to life because of feelings of loneliness. The same effects can be observed again in October 2020, because some elderly care homes imposed strict rules again. But from an ethical point of view it seems to be necessary to find better way to protect employees and patients. Isolation does not seem to be an appropriate measure in modern times and after more than 6 months of experience, research, and data analysis on Covid-19. Main spreading events need to be analyzed and more detailed measures need to be applied – as some courts already claim for the people.

In addition to this, the measures imposed by the government indirectly caused a restriction in medical supply of Non-COVID-19 patients as many medical practices have been closed, operations and agnostic interventions were postponed and psychotherapy and physiotherapy treatments have only taken place very limited. Furthermore, operations and diagnostic procedures were postponed in order to have sufficient capacity for the treatment of COVID-19 patients or in the other case, patients voluntarily renounced their normal doctor's visits, check-ups or even operations to protect themselves from the virus. The resulting medical damage is difficult to quantify but it can be assumed that this condition leads to an increasing mortality. For this reason, it is particularly important to treat COVID-19 and Non-COVID-19 patients (e.g. patients with diseases such as cancer or cardiovascular diseases) equally and to care for both of them according to the same criteria (Abele-Brehm et al., 2020, 4 f.). Due to the potential collateral damage of the pandemic caused by the risk of an increase in suicides and depressions, an insufficient medical treatment of Non-COVID-19 patients and the risk of a loss of courage and will to live of the elderly, the attitude of entirely subordinating everything else to the infection protection might be highly questionable.

The German Ethics Council welcomes the aforementioned statement of Wolfgang Schäuble as in their published recommendation they underline: “Even the required protection of human life is not absolute. The rights of freedom and participation as well as economic, social, and cultural rights should not be *unconditionally* [highlighted by the author] subordinated to it” (Sharpe, 2020, 5). To sum up this issue of human dignity and protection of human life in Corona – times one can say that the goal of saving COVID-19 patient’s lives undoubtedly still exists but this initial attitude of entirely subordinating everything else to the protection of human life meanwhile needs to be partly relativized as in the end a total risk hedging is not possible and not even the state can entirely protect us from death. In addition, the grave collateral damage and the indirect side – effects of the initial strong medical focus on COVID-19 patients must be taken into account as well.

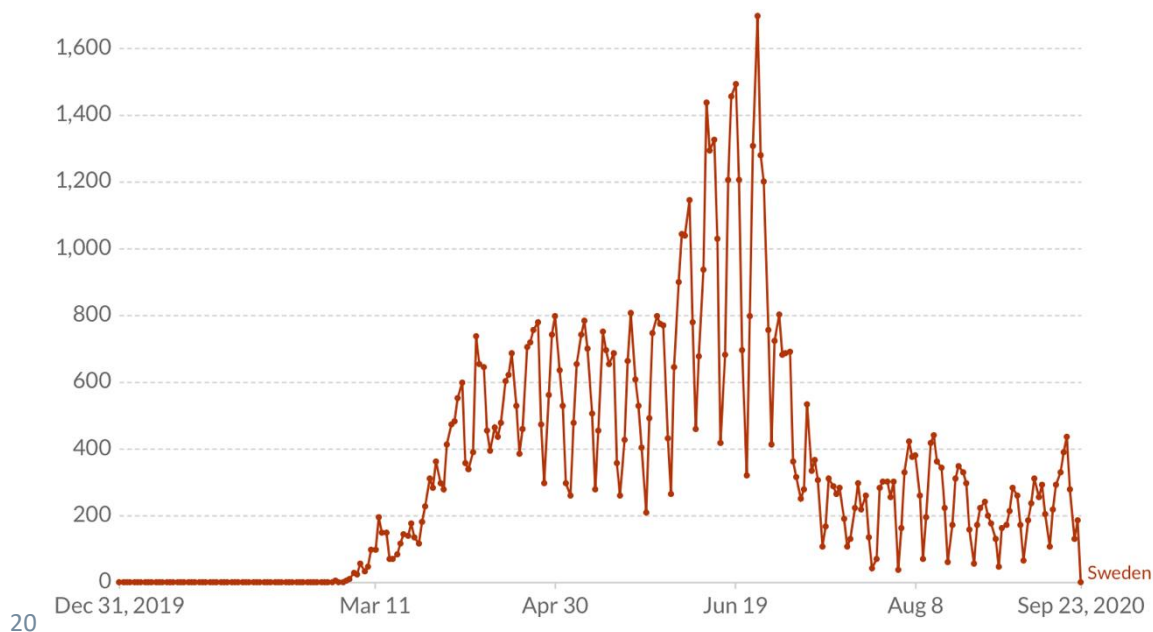
4 International Comparison

As already stated in “3. Analysis” the pandemic caused by the coronavirus can be regarded as a “global pain” as the whole world is affected and many economies are expected to fall into a recession. In order to make conclusions about potential solution strategies it might be interesting to have a closer look at other countries than Germany and to proof whether these countries’ governments differed in their way of handling the situation and to make critical conclusions about the respective consequences for the country. In the following, Germany’s crisis management will be compared to the Swedish and South Korean one mainly with regard to the measures taken from the government in order to contain the virus, the countries’ ethical attitudes towards the issues of depriving people’s freedom and data privacy as well as the resulting medical course and economic impact of the pandemic.

4.1 Sweden

The Scandinavian country Sweden decided to set out a special path in terms of its crisis management as a response to the current pandemic caused by the coronavirus. The main difference to other countries is that in recent months the Swedish public and economic life has been restricted far less than the European and International average. While most countries’ governments imposed a strong lockdown and citizens were put into a mass quarantine, the Scandinavian country’s restaurants, shops and schools remained open. In contrast to the majority of other countries’ the Swedish government tried to appeal to the population’s sense of responsibility to voluntarily restrict contact to other people. As a result of this special way of acting Sweden was under broad discussion and criticism. In addition to its crisis management based on trust and solidarity, one central pillar of the Swedish way of dealing with the situation was a protection of the elderly as they were promised to not be socially excluded from the rest of the Swedish society. However, it was clear that in such a crisis management that strongly relies on voluntarism and responsibility instead of strong restrictions and contact bans, it is particularly important to focus on the protection of the risk groups. Accordingly, from the beginning of the crisis on, the Swedish state epidemiologist Anders Tegnell and the Swedish Prime Minister Stefan Löfven stressed that particularly older people should be protected during the fight against the virus. However, even though the protection of the elderly might initially had been very distinct in Sweden, this aim could not be realized. By contrast, experts are saying that Sweden was the worst country when it comes to the protection of the elderly (Strittmacher, 2020). Figure 4-1 clearly shows that from the middle of March until July 2020 the country constantly reported a high number of new COVID-19 cases and was initially not able to contain the pandemic at all. It can be supposed that the low-points on 20th, 28th and 29th of June might not represent the reality but rather are due to an incomplete reporting of the official infection figures by the Swedish health system. However, during the months August and September the Scandinavian country reported fewer daily cases as in the previous months and was able to flatten its infection curve a little bit.

Figure 4-1: Daily new confirmed COVID-19 cases in Sweden



Source: European Centre for Disease Prevention and Control (ECDC) collated by Ritchie et al. 20

Nonetheless, due to the country's constant high increase in new cases during May until July 2020 when the majority of other countries was able to flatten their infection curves, by critics the Swedish kind of crisis management was called "The fatal special path". Until the 23rd of September 2020, the country recorded 89,756 infections from which 5,876 people died. This results into 858.42 infections per 100,000 Swedish inhabitants which is compared to Germany's figure (331.61) very high. In addition, the Swedish COVID-19 related mortality rate per 100,000 inhabitants is 56.20 which is almost five times higher than the one of Germany that is 11.34 (Table 3).

Moreover, compared to its Scandinavian neighboring countries, Sweden has a higher infection and death rate as for example Norway (5.3 million inhabitants) which, indeed, consists of only slightly more than half of the Swedish population (10.45 million inhabitants) but until the 23rd of September 2020 it recorded 267 deaths in contrast to 5,876 deaths in Sweden. Finland with 5.5 million inhabitants stated to have recorded 343 deaths until the 23rd of September 2020. In addition to the Swedish high infection rate, another strong influencing factor towards the high mortality rate of Sweden is the country's health system. In comparison to Germany, Sweden is provided by less than 1/6 of critical care beds per 100,000 inhabitants and less than 1/5 of ventilators per 100,000 inhabitants (s. Table 4-1). With regard to the expected economic impact of the crisis, Sweden is positioned by a higher unemployment rate (9.1 percent) than Germany (6.4 percent) in August 2020. Nonetheless, the country suffered under a less strong export slump in April 2020 and the expected extent of real GDP decrease for 2020 is comparable to the German one (s. Table 4-1).

Table 4-1: Country comparison between Sweden, Germany and South Korea

Indicators	Sweden	Germany	South Korea
Course of the pandemic			
Total number of confirmed infections (until 23.09.2020)	89,756	277,622	23,216
Infections per 100,000 people (until 23.09. 2020) * Own calculations based on population figures (2020)	858.42	331.61	44.60
Total number of COVID-19 related deaths (until 23.09.2020)	5,876	9,496	388
COVID-19 related deaths per 100,000 people (until 23.09.2020)	56.20	11.34	0.75
Medical system			
Total number of critical care beds per 100,000 inhabitants (2019)	5.8	38.7	10.6
Total number of ventilators (2019)	570	25,000	9,795
Number of ventilators (2019) per 100,000 inhabitants *Own calculations based on population figures (2019)	5.57	30.11	18.81
Measures taken from the government			
Total number of Corona tests (until 23.09.2020)	1,532,632	14,557,136	2,256,899
Testing rate (Number of Corona tests / 1 million inhabitants)	151,541	173,618	44,012
Temporal nation – wide lockdown (Closure of schools, restaurants etc. ?)	No	Yes	Yes
Contact Tracing App during the Great Lockdown?	No	No	Yes
Economic Impact			
Projected real GDP growth (in % change) for 2020	-6.8	-7.0	-1.2
Unemployment rate in % (August 2020)	9.1	6.4	3.2
Export decrease in % (April 2020 compared to April 2020)	-10.0	-31.1	-24.3

Source: Own representation based on data provided by IMF 2020, Bundesagentur für Arbeit, 2020a; Korean Statistical Information Service, 2020; Worldometer, 2020 a-f; John Hopkins University, 2020; Moody's Analytics, 2020; Kohlmann, 2020; Statistisches Bundesamt, 2020 a,d,f)

Nonetheless, regarding the economic data it must be said that the percentage GDP development for the economic year of 2020 is currently only based on estimations.

To sum up, one can say that the Swedish measures of containing the outbreak of the virus were far less drastic than in Germany. The main difference is that the Swedish government did not rely on strict bans but on the insight and willingness of citizens to regulate themselves and to keep their distance voluntarily. Based on the fact that Sweden seems to have relatively far more deaths but an economic damage at the same time, the question whether the Swedish special path was a mistake is a legitimate one and the future will show in how far the Swedish government will regret its decisions. However, especially during the months of August and September 2020 the Swedish example has shown that its country was able to lower the number of new infections even without strong and radical measures taken against the pandemic. Nonetheless, the opinions with regard to the Swedish special path seem to be divided as many experts criticize it but there are also people like Mike Ryan, the Executive Director of the WHO Health Emergencies Programme, who supports and even recommends the Swedish crisis management. He sees Sweden as a pioneer in respecting the fact that the society has to adopt its physical and social conditions to the virus as the change of lifestyle caused by a quarantine might have to be maintained over a longer period (Lemkemeyer, 2020). Whereas in the beginning of the pandemic the Swedish way was strongly put into question, this criticism partly changed into a better understanding of the country's crisis management and decisions.

4.2 South Korea

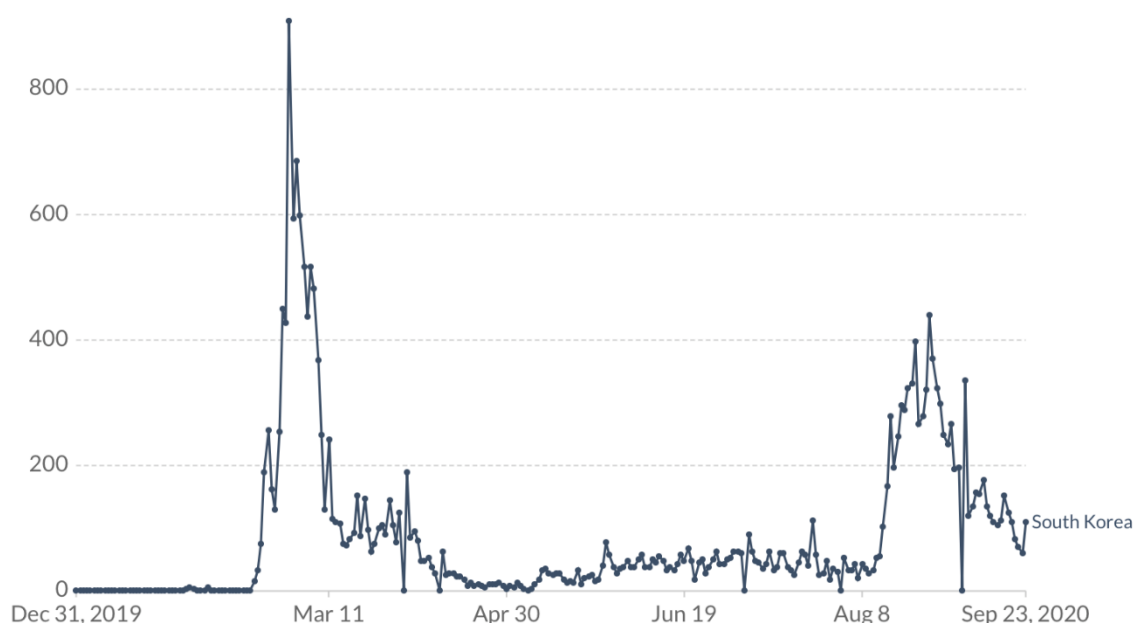
In contrast to Sweden's crisis management that basically relied on trust, solidarity and voluntarism the measures of the South Korean government for containing the coronavirus were stricter. The South – Korean way of acting is mainly characterized by fast reactions, a nationwide early testing and the use of a contact tracing application while, in contrast to countries like China, still keeping democratic standards. The country's successful crisis management can be proven by having a closer look at the course of the pandemic in South Korea. Figure 8 clearly shows that despite the great outbreak in February 2020, the country's daily new infections curve slowed down very fast and has, with little fluctuations, remained close to this level until the end of July but then increased again in August and September 2020. If one compares the South Korean COVID-19 infection rate with the German one it becomes visible that South Korea recorded only 13.4 percent of infections per 100,000 people of Germany's figure and only around 5 percent of the one of Sweden if one compares the South Korean figure of 44.60 infections per 100,000 with Germany (331.61 per 100,000) and Sweden (858.42 per 100,000). Moreover, the South Korean COVID-19 related mortality rate is far lower. Whereas in South Korea only 0.75 of 100,000 people died from the coronavirus until the 23rd of September, in Germany it were 11.34 and in Sweden 56.20 per 100,000 inhabitants (Table 3).

What are the reasons for this quick and consequent performance of containing the virus? The main difference to other European countries is the South Korean speed in action as the country reacted to the outbreak of the virus in a very fast way. After the official confirmation of the first coronavirus - related death, the South Korean government declared the highest warning level

for infectious diseases. The measures known in Germany under the term “Social Distancing” were also applied in South Korea and were interpreted in a

quite similar way. As in Germany as well, the South – Korean concerts and festivals were cancelled, sporting events were postponed, restaurants and bars were closed and large companies arranged home office for their employees. In addition, museums, libraries and kindergartens remained closed and the start of the school term was postponed for several times.

Figure 4-2: Daily new confirmed COVID-19 cases in South Korea



Source: European Centre for Disease Prevention and Control (ECDC) collated by Ritchie et al., 2020

However, about the country’s frequency of testing a significant difference comes into play. An early massive nationwide testing belongs to the main characteristics of the South Korean crisis management. Even though Germany has significantly increased its test capacities, there is still a big difference between these two countries’ scope and extent of testing especially in terms of the beginning of the pandemic. In the middle of March, South Korea relatively tested around one third more than the German Federal Republic which can be proven by the calculated relative indicator of 23 tested persons per 100,000 inhabitants in South Korea and 17 tested persons of 100,000 inhabitants in Germany in March 2020 (Rydlink, 2020). Nonetheless, as Table 3 implies, the South Korean absolute as well as relative figure of Corona – tests until the 23rd of September 2020 is lower than the German as well as Swedish one which is due to the fact that the country had only rarely new infections until July 2020 and in contrast to the other two countries, South Korea tested very intensively in the beginning, successfully stopped the exponential infection increase and was therefore not anymore in the need of testing that much afterwards. South Korea has used its early nationwide testing to its advantage as the country had more accurate information on factors such as its mortality rate, number of recoveries and number of

infected people. This helps to avoid a high number of unreported cases, gives the government a better overview of the situation in its country and enables it to take appropriate measures.

The second main reason for the South Korean success in its crisis management might be the implemented tracking of contact persons. Every infected South Korean citizen was forced to download an application which reports its GPS data to the government. This strong control enabled the country to precisely determine where infected persons have stayed. This implies that in the Korean culture, the extent of restrictions to data privacy was far deeper than in Western countries like Germany or Sweden. As stated in “3.2.1.2. Data privacy” this procedure of forcing people to a Corona-App was a highly discussed and ethically questionable issue in Germany because of data protection reasons. Nonetheless, in the middle of June 2020 a final contact tracing Corona - App has been released also in Germany but with the temporal difference that the final release was 3 months after South Korea and the additional difference that in Germany the app is voluntary whereas in South Korea it was mandatory. Thus, South Korea seems to have another attitude in terms of data protection and the resulting weighing - up process with civil liberties. According to the South Korean view, the infringements of data protection in their contact tracing system seem to be less serious than the far – reaching restrictions on freedom and the economic impact the lockdown caused. In other words, the country’s way of acting implies that for South Korea the right to freedom deserves more importance than the right and respect to data privacy (Kölling, 2020). This attitude belongs to one of the main differences to Germany and Sweden who seem to be more sensible and critical towards the issue of data privacy. With regard to the used application in South Korea one can additionally state that this measure of forcing people to such an application was unthinkable in Germany. However, the country South Korea has proven that this method showed effectiveness. With regard to the country’s health system one can say that it is better provided by critical care beds and ventilators than Sweden but still worse than Germany (Table 4-1).

In addition, South Korea protected its citizens by a quick and broad distribution of masks which is another difference to Germany that initially suffered under an insufficient stock of masks. An additional influence on the way of handling and reacting to the virus can be derived from South Korea’s experience gained from its crisis management as a response to the MERS – virus of 2015. Thus, the country was possibly better prepared to such a crisis which is for the majority of countries a formative and unique experience and a state of emergency for which no one was prepared (Stöber, 2020). Nonetheless, despite the South Korean apparent great performance in terms of containing the virus and the resulting low new infection figures for several weeks, the country is suffering an economic impact anyway. As one can see in Table 3, South Korea’s expected decrease in Gross Domestic Product for 2020 is -1.2 percent and the unemployment rate of August 2020 was 3.2 percent which is both moderate if one compares these figures to the German and Swedish economic damage. Nonetheless, the export value of South Korea collapsed by -24.3 percent in April 2020 if compared to April 2019 (Table 4-1). This export collapse is higher than the one of Sweden but lower than the one of the export nation Germany which suffered under a percentage decrease of -31.1 in April 2020 compared to the same month of the previous year.

Finally, the question raises whether South Korea can be seen as a role model in the fight against the coronavirus. In a strategy paper of the German Federal Ministry of the Interior that was addressed by the fight against a contamination of the virus, the country South Korea is mentioned as a role model (Stöber, 2020). By the aforementioned measures of a massive, early testing and a mass isolation of sick people, the spread of the virus was enormously slowed shown without the necessity of bringing the public life to a total standstill such as in Spain or in Italy.

4.3 Different strategies

What mainly can be concluded from this comparison between the three countries is that even though all three countries (Germany, Sweden and South Korea) have been and are still affected by the same virus SARS-CoV-2 every country has chosen its own way of reacting to the pandemic which implies that there exist different possible solution strategies with regard to such a pandemic's crisis management. However, which strategy should or can be applied depends on several factors such as the course of the pandemic and the resulting extent of necessity to put people into mass quarantine and restricting their fundamental rights. Additional sources of influence are the political system of the country, the collected experience with regard to a pandemic's crisis management as well as the country's ethical ideologies, attitude and sensitiveness towards issues like human dignity and data privacy. With regard to the economic impact, especially the example of South Korea has proven a country's potential economic dependency caused by globalization.

Even though South Korea was almost able to contain the virus and had only hardly new infections from April until July 2020, its export value is still declining by an extent like never before. This reveals South Korea's interdependence and integration into world's economy and global supply chains which can be equally applied to Germany. Moreover, the comparison has shown differences between the country's preferences. Whereas Germany seems to be very sensitive when it comes to the issue of data protection, South Korea prioritizes the right to freedom over the right to data privacy as the forced implementation of the application has shown. Whereas South Korea and Germany both won recognition in terms of their crisis management especially in the first months of the pandemic, the solution strategy of Sweden is on the one hand positively evaluated but on the other hand also highly negatively assessed as both the country's state of health as well as the Swedish economy suffer.

5 Conclusion

5.1 Lessons from the crisis

As a vaccine which will provide a final long – term solution for the global pandemic is not yet produced nor found, the global pandemic is not yet over and it will still influence our daily lives for an unlimited and currently (Date: End of September 2020) uncertain period of time. Nonetheless, after the first months of dealing with this situation it is worth reflecting on Germany's performance in terms of its crisis management to date and most importantly, to think about potential lessons that can be derived from the crisis.

First of all, with regard to our society, the crisis shows the enormous importance of the systemically important professions such as workers in the health system, the police, postal delivery staff, truck drivers and employees working for the food industry and retail trade. In addition, the indispensability of schools and day - care centers has been highlighted by the crisis. As a result of the new appreciation of these professions, the question arises whether these jobs should be better remunerated in the future. A discussion about this topic is very important as the crisis has shown how dependent the functioning of our economy and society on these professions is (El-Mafaalani, 2020).

In terms of environmental issues one can state that as a result of the lockdown's positive impact on the environment such as a high decrease in air pollution an important insight gained from the crisis is the high necessity of turning the economy into a new, more – climate friendly “green model”. The main possible measures include the transformation towards a carbon – neutral economy and a more sustainable agriculture (Ehlers, 2020). However, in how far these goals can be implemented and realized can only tell the future since the billions of investments spent on the health protection consequently cannot be spent for a modernization of the economy. Travelling and our general consumerism is another factor which can be addressed in this context as the pandemic has thought us that our limited freedom of movement had positive consequences for the environment. Thus, the crisis can be seen as a potential chance towards a step into a more sustainable tourism as it might inspire us to travel again with a little more humility and to think more about how often and how far to travel (Schmude, 2020). However, the extent to which this change in awareness of consumer behavior will be maintained in the long term is questionable.

With regard to the health system the crisis has shown that Germany is relatively well – positioned as the comparative indicator of intensive beds and ventilators per 100,000 inhabitants in contrast to the other countries has revealed. As a result, a saturation point of the German health care system and thus the tragic scenario as described in “3.2.2.1. Decision – making in case of triage” could be avoided in Germany. Moreover, the renunciation of things that were previously taken for granted such as meeting parents, children, grandchildren and friends or the warm embrace and the personal face – to – face conversation gave us a new kind of appreciation. Through the lockdown and the absence of these small everyday things we were made aware of how important they are and as a result, a new kind of appreciation of these non – materialistic things has developed.

In addition to the above - mentioned lessons it might be interesting to have an additional reflective look on which parts of the German crisis management could have been done better in the aftermath. First of all, the question raises whether Germany could have been better prepared for such a crisis and the answer is yes. The initial non – existing access and high difficulty of delivery with regard to inexpensive medical products like masks or disinfections which created feelings of fear and uncertainty in the population could have been avoided if there would have been a sufficient stock of these hygiene products. Thus, a potential lesson from this crisis might be to better provide the country with inexpensive medical products in order to be better prepared from the beginning on of such a pandemic. Additionally, this insight can be applied to

hospital staff equipment. Germany's detected dependence on importing supplier products like medical devices and masks might be improved for the future. In addition, it might be put into question whether the rigorous closure of hairdressing salons or retailers was really necessary.

What still raises confusion and lack of understanding is the question why all shops despite supermarkets and pharmacy had to be closed while there was no mask obligation at that time. There are reasons mentioned such as the insufficient stock of masks. However, a logical explanation why a few months ago a scarf or another face and nose cover was not sufficient (whereas it is today) is not yet found (Aust, 2020). In general, in the aftermath one can reflect whether more regional and more flexible solutions from the beginning of the crisis on would have had been more appropriate than general decisions.

Moreover, the crisis reflected the deficits of the digital infrastructure. "Online – Wonderland" seems to be an unrealistic idea that teaching for children at home can work. By contrast, the crisis shows that not only the parents' homes but also schools are not sufficiently digitalized. However, this statement needs to be relativized when it comes to the experience of companies as some entrepreneurs (e.g. the CEO of Twitter) consider home - office for their employees even after the end of the pandemic (Paul, 2020).

Another lesson from the crisis comes into play if one considers the interconnection and interdependence of international supply chains. The Corona crisis has shown that the Just in Time (JIT) – strategy, conducted by many companies, should be critically questioned. The pandemic has revealed this strategy's weaknesses such as the fact that JIT - concepts provide only low buffer stocks which are sufficient only for small time periods and do not allow huge errors in the planning and control processes. It should be checked whether this strategy is really safe enough. Approaches are needed which allow global supply chains to be more resilient, such as by shifting them towards more regional / local supply chains, at least for essential products areas (Hackmann, 2020).

5.2 Main results

After having analyzed the economic consequences and ethical challenges as a result of the global coronavirus pandemic one can sum up the following main insights: The analysis of Germany has proven the graveness of the macroeconomic impact of the crisis which is mainly characterized by a strong decline in Gross Domestic Product, an export collapse, an increase in unemployment and an unprecedented level of short – time working arrangements as well as a high increase in government debt and a reaction of the German capital and stock market. In addition to this, the economic analysis on the meso level has shown to what extent the pandemic is posing German domestic companies as well as German international enterprises to a multitude of challenges. The majority of companies suffered under decreases in sales, a declining demand and postponed or entirely cancelled investments as well as liquidity bottlenecks. Moreover, the analysis has revealed that the pandemic affects the majority of the German economy but nonetheless, there are differences in the extent of the impact and some industries even profit from the crisis. Whereas the hospitality, travel and tourism industry particularly suffer, online

retailers, videoconferencing and collaborations providers and the pharmaceutical industry can even be called “The winners of the Corona crisis”.

In addition to the economic impact, the social psychological consequences and side – effects caused by the National lockdown of 2020 such as depressions and suicidality caused by isolation and existential fears as well as the increase in cases of domestic violence are equally important to consider. Accordingly, the analysis has clearly shown that in addition to the medical threat of death caused by the SARS-CoV-2 virus, the pandemic indirectly leads to grave a collateral damage as a result of the measures taken from the government to contain the virus.

Moreover, the pandemic causes ethical dilemmas and morally questionable issues both from a medical – ethical point of view because of potential triage situations and discussions about human dignity and life risk as well as from a social – ethical level mainly caused by the high restrictions of fundamental rights, the intervention in data privacy and the measures’ limitations when it comes to the rule of equality of opportunities. The comparison of the measures and the pandemic’s course of Germany, Sweden and South Korea has shown that there exist different solution strategies to deal with such a pandemic and the country contrast has revealed the differences in countries’ preferences such as South Korea’s prioritization of the right to freedom over the right to data privacy which has shown to be contrary to Germany’s attitude. The analytical comparison has also revealed the fact that in which way a country reacts to such an extreme situation highly depends on the country’s course and initial experience with a pandemic and its moral ideology and political system are also relevant.

With the exception of Sweden, all other countries (Germany and South Korea included) have tried to eradicate the virus SARS-CoV-2. Even though in the beginning of the crisis Germany and South Korea were both able to flatten their infection curve and could avoid a situation of an overloaded health system, they were not able to entirely contain the virus as the infection numbers of August and September 2020 have clearly shown. Nonetheless, with special regard to Germany, one can finally sum up that despite the non – existing experience with such a crisis the country dealt relatively well with this unknown situation as a triage situation and a collapse of the medical system could be avoided even without initially testing as much as in South Korea and without having had a contact tracing application during the Great Lockdown in March and April 2020. Nonetheless, based on the Swedish example and its infection figures of August and September 2020 there could be a legitimate speculation as to whether the German death figures would possibly have not even been very different even if there would have had less radical measures been taken against the pandemic.

5.3 Outlook

After the critical analysis of measures and actions against the outbreak of the virus SARS-CoV-2 and the reflection on potential lessons from the crisis a brief outlook to the discussion will follow. The analysis has clearly shown that in addition to the medical threat of death caused by the virus, the pandemic provokes a huge collateral damage such as an economic loss both in macroeconomic terms and on a meso level but the social – psychological consequences caused by

the restriction of fundamental rights and the increase of domestic violence are to be highly considered as well. Thus, the financial and mental burden on the economy and society is enormous.

As a result of the graveness of the collateral damage, it is particularly important to include diverse perspectives into the ongoing consideration processes. Political decisions must take into account the multi-dimensionality of the crisis and actions must be taken accordingly. As a consequence of the broad impact of consequences in different levels and for different interest groups, it is particularly important to involve a wide consensus of science into the decision – making process and to not only trust the virologists. Thus, an interdisciplinary approach is the most suitable way of dealing with the crisis in order to cope with the current and future challenges in the most responsible and appropriate way for all affected parties. In other words, future decisions must not and cannot exclusively be based on the medical perspective. Instead, it is particularly important to involve other sciences' representatives such as sociologists, economists, psychologists, business ethicists and jurists. As the risk of a second lockdown cannot yet be excluded, the arising conflict of interests and weighting - up process between health, ethics and economy must be further discussed.

In addition, it is important to state that even in existentially threatened situations the one suitable measure of crisis management that interferes least intensively into fundamental rights should be chosen. Moreover, the goal of saving people's life should undoubtedly still exist but the political debate should distance itself from the unrealizable illusion of being able to save every human life. Our life can never be risk – free. What should be stressed as well is that a balancing process is unavoidable. This crisis provokes a weighting - up process between economy and health, between freedom rights and data protection rights, between human life and freedom and the weighting - up of which human life is mostly worth to be protected is also induced.

As an entire realization of all goals as well as a total life risk hedging is not possible, politicians were forced to weight up the risks, chances and goals of the different perspectives. It is particularly important to continue following a strategy which includes both goals, to have fewer deaths on the one hand but to protect the economy on the other hand. Nonetheless, this crisis in its entirety is not only a challenge for policymakers to take the right decisions but more importantly, it is a task for our society as a whole to act in a sense of responsibility and solidarity, gratitude, compassion for each other, hope, respect, discipline, decency and serenity. In addition, it must be stressed that in contrast to South Korea, for Germany this pandemic is an exceptional, historically unique situation that the German government and politicians themselves as well as the population have not yet experienced before. Especially taking this inexperience with such a pandemic into account one has to admit that especially in the beginning of the crisis Germany's government did a good job with regard to its crisis management.

Nonetheless, in some areas the German crisis management must be criticized as well. The pictures from Italy and the USA have shown that rigid measures were necessary but in Germany, where the health system has never been overloaded at any time, it is now necessary to switch back from the panic mode to a reality mode. With regard to future actions and decisions it is particularly important that the yardstick is not the fear and an obscuring of facts, which is partly

provoked by the press and media, but rather the view of reality and the collateral damage the pandemic is causing should be a basis for future decision – making. Meanwhile one should critically put into question whether the government’s measures are still in proportion to the consequences since it must be ensured that the indirect negative consequences do not become greater than the benefit of the measures (Aust, 2020).

As already mentioned, in the ongoing next phase of the crisis the goal of protecting people’s lives undoubtedly still exists but nonetheless, it is important to manage the measures in a more differentiated and flexible way in order to keep the provoked negative impact as low as possible. Therefore, for the ongoing dealing with the crisis there must be a continuous cushioning of psychological and social effects, as described in “3.1.2. Social psychological consequences”. Attempts must be made to minimize the negative psychological and physical burdens by offering help and support to groups that particularly suffer from the crisis such as people threatened by suicide because of insolvency and existential fears, children in difficult family situations or women suffering from domestic violence. Children and their fundamental right to education needs to be highly considered and respected as well. In addition, fiscal and financial and labor market policy instruments such as short – time work, liquidity assistance or tax deferrals must continue to be applied in order to reduce insolvencies as much as possible and to counteract the recession that is approaching the German economy.

Lastly, it must be emphasized that only a vaccine will provide a long - term solution. Until then, the overall aim should be to find the best - possible way to create this new normality as viable and enduring as possible, to ensure the measures to be in line with the plurality of values and norms of our democratic society and ethical standards and to reconcile people’s health, economic and social interests as best as possible in order to continue to save lives while at the same time minimizing the collateral damage of the crisis. We must learn to live with the virus for the time being until we might be able to control it better. Therefore, politicians should not only use regulatory policy, because there are too many loopholes. A broad regulatory framework is necessary with strict controls and high fines, and it must be clear that the honest is not the fool. A large majority is acting according to the rules and must not be punished because some groups are not obeying. These people need to be treated with respect. They must and can be trusted to do what is necessary. Unfortunately, as in many other situations e.g. in companies or at school and university as well, the majority must suffer because the leaders are focusing too much on those who are misbehaving. The disobedient gets all the attention, while the trustworthy are missed out. In the long term this leads to frustration, due to the micromanagement. Given a transparent and clear strategy, the majority will do what is necessary and stick to the hygienic concepts to reduce the likelihood of dramatic developments– and another lockdown. Regional measures for hot spots are more likely to be accepted, if they are based on more than one figure to cover more of the mentioned (side) effects of measures. People will trust the government more, if the restrictions are based on empirical findings of spreading events etc. After more than 6 months, a better empirical database should be available, so that we do not have to rely on emergency measures like in March and April. Given the high costs of a lockdown, money spent on research on evaluations of the dilemmas mentioned here, would be well spent.

Abstract

Ziel dieser Forschungsarbeit ist es, die wirtschaftlichen Folgen und ethischen Herausforderungen, die durch die Coronavirus-Pandemie verursacht werden, zu analysieren und heraus zu erarbeiten, wie in dem entstehenden Interessenkonflikt zwischen Wirtschaft, Gesundheit und Ethik ein Kompromiss gefunden werden kann. Die Lösungsstrategien Deutschlands, Schwedens und Südkoreas werden verglichen, um verschiedene Arten des Krisenmanagements zu bewerten und anschließend mögliche Lehren aus der Krise abzuleiten. Die Methodik beruht in erster Linie auf der Analyse von zuletzt veröffentlichten Wirtschaftsstudien und Umfragen sowie auf der Auswertung von Literatur, wie z.B. der jüngsten Stellungnahmen und Veröffentlichungen wirtschaftlicher, ethischer und medizinisch-ethischer Institutionen. Diese Analyse stellt die Multidimensionalität der Krise heraus. Neben den gravierenden makroökonomischen Konsequenzen für die gesamte Wirtschaft gibt es je nach betrachteter Branche Unterschiede im Ausmaß der Auswirkungen der Krise, die zu Verlierern und Gewinnern zugleich führt. Neben den makroökonomischen Schäden und den Konsequenzen auf Unternehmensebene sind auch die sozialpsychologischen Folgen des nationalen Lockdowns von 2020 wie etwa die Zunahme häuslicher Gewalt sowie Depressionen und Suizidalität, ausgelöst durch Isolation und Existenzängste, zu nennen. Insgesamt führen die von der Regierung ergriffenen Maßnahmen zur Eindämmung des Virus zu schweren Kollateralschäden und die Pandemie verursacht sowohl auf sozial - ethischer als auch auf medizinisch-ethischer Ebene moralische Dilemmata durch hohe Grundrechtseinschränkungen, einen Eingriff in den Datenschutz, die Einschränkungen der Maßnahmen im Hinblick auf das Konzept der Chancengleichheit und die Möglichkeit einer Triage-Situation. Aufgrund dieser multidimensionalen Auswirkungen für verschiedene Interessengruppen ist es besonders wichtig, einen breiten Konsens der Wissenschaft in den Entscheidungsfindungsprozess einzubeziehen und nicht nur einzelnen Wissenschaften/-lern oder Institutionen zu vertrauen. Um die Kollateralschäden der Krise zu minimieren, wird empfohlen, den von der Krise am stärksten betroffenen gesellschaftlichen Gruppen Hilfe und Unterstützung zu gewähren und wirtschaftliche, finanzielle und arbeitsmarktpolitische Instrumente wie Kurzarbeit und Liquiditätshilfen einzusetzen. Ansonsten muss aber auf ein professionelles, datenbasiertes Risikomanagement umgestiegen werden. Denn bis ein Impfstoff gefunden ist, ist das zentrale Ziel für die nächsten Monate, den Schutz der Würde der Menschen sowie soziale und wirtschaftliche Interessen so gut wie möglich miteinander in Einklang zu bringen, um einerseits eine Übersterblichkeit und eine Überlastung der Gesundheitssysteme zu verhindern und andererseits die dauerhaften Kollateralschäden der Krise so gering wie möglich zu halten. Dies setzt voraus, sich auf der gesellschaftlichen (Makro-) Ebene – zum Beispiel bei der Bundesregierung – einer utilitaristischen Ethik zu folgen, um auf der individualethischen (Mikro-) Ebene – wie zum Beispiel bei ärztlichen Behandlungen – weiterhin der deontologischen Ethik folgen zu können.

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