

Daube, Carl Heinz

### Working Paper

## Covid-19 – Impacts on Society and Economy

IUCF Working Paper, No. 3/2022

*Suggested Citation:* Daube, Carl Heinz (2022) : Covid-19 – Impacts on Society and Economy, IUCF Working Paper, No. 3/2022, ZBW - Leibniz Information Centre for Economics, Kiel, Hamburg

This Version is available at:

<https://hdl.handle.net/10419/249296>

#### Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

#### Terms of use:

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*

## Covid-19 – Impacts on Society and Economy

Carl Heinz Daube<sup>1</sup>

### Management Summary

Since the turn of the year 2019/2020, Covid-19 has determined large parts of public and private life worldwide. The restrictions are causing social and economic issues in all areas of life. This working paper attempts to quantify and qualify some impacts on our society and our economy and to analyse in more detail some of the effects.

### Zusammenfassung

Covid-19 bestimmt seit dem Jahreswechsel 2019/2020 weltweit weite Teile des öffentlichen und privaten Lebens. Die Einschränkungen in vielen Lebensbereichen können nicht ohne gesellschaftliche und ökonomische Folgen bleiben. In diesem Working-Paper wird versucht, einige Auswirkungen auf unsere Gesellschaft und unsere Wirtschaft qualitativ und quantitativ zu erfassen und näher zu analysieren.

### Introduction

The coronavirus has been keeping the world in suspense for more than two years and is impacting daily life of almost everyone. As of January 21, 2022, the WHO reported around 340 million people infected with the coronavirus, more than 5.5 million deaths in connection with Covid-19 and about 9.5 billion vaccine doses administered<sup>2</sup>. When we have a look at the development of the process of infections in Germany since the first known case on January 27, 2020<sup>3</sup> the following chart emerges.

---

<sup>1</sup> Dr. Carl Heinz Daube, Professor of Finance and Vice Rector Research at the NBS Northern Business School - University of Applied Sciences, teaches and researches at the IUCF Institute for Corporate Accounting, Controlling and Financial Management. He is also a partner at MGRP Management Group Dr. Röser & Partners.

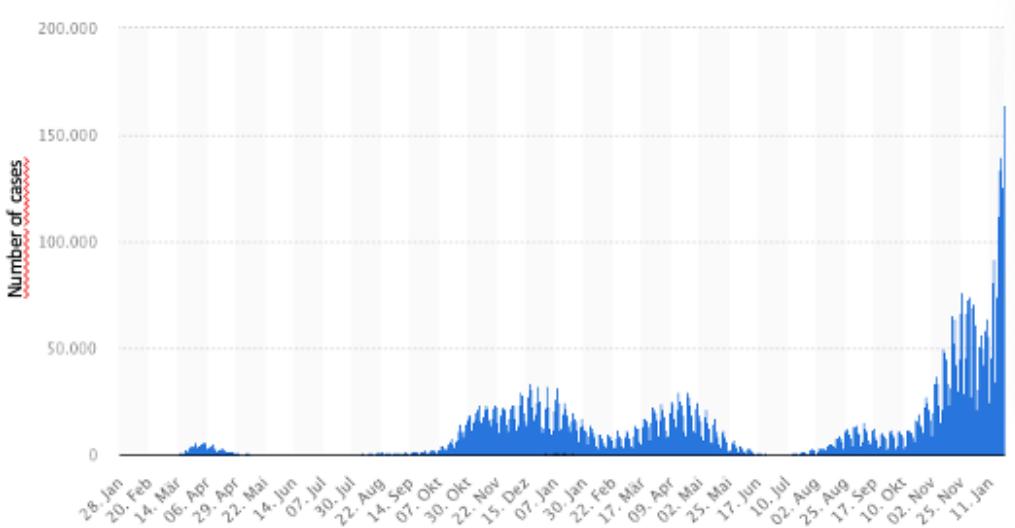
*The author would like to thank Jan Bröcker, student assistant at the IUCF, for his kind support. Special thanks go to dott.ssa Anna Bertini, researcher at Istituto Superiore di Sanita (ISS), for most valuable comments.*

<sup>2</sup> Cf. WHO, 2022.

<sup>3</sup> Cf. Kunkel, 2021.

## Chart 1

Daily new infections in Germany since January 2020



<https://de.statista.com/statistik/daten/studie/1100739/umfrage/entwicklung-der-taeglichen-fallzahl-des-coronavirus-in-deutschland/#professional>

We clearly see one wave after the other. The amplitudes reached unprecedented new heights since autumn 2021. Currently, there is no end of this development in sight, although 73 % of the German population is now considered fully vaccinated<sup>4</sup>.

In addition to human destiny, the economy suffers considerable losses, which in turn puts additional strain to the situation of many people and sometimes leads to considerable existential fears<sup>5</sup>. It is not yet possible to estimate how high the "costs of the pandemic" will be - it will probably never be possible to determine these costs correctly. Experts assume that the economic damage will amount to many trillions of euros<sup>6</sup>. Incidentally, as it is well known, the pandemic is not over yet.

It is a particular tragedy that everything that has happened since spring 2020 was not a real surprise. In May/June 2020, scientists warned of a second and third wave<sup>7</sup>. In addition, they predicted several mutations<sup>8</sup>. Those responsible in Brussels and Berlin could have used the summer months of 2020 to draw up action plans<sup>9</sup>. There exist more than enough suitable tools e.g., from project

<sup>4</sup> Cf. Impfdashboard, 2022.

<sup>5</sup> Cf. Brandes, 2020.

<sup>6</sup> Cf. no author, 2021.

<sup>7</sup> Cf. Schneider, 2020.

<sup>8</sup> Cf. Schmidt, 2021.

<sup>9</sup> Cf. Daube, 2021a.

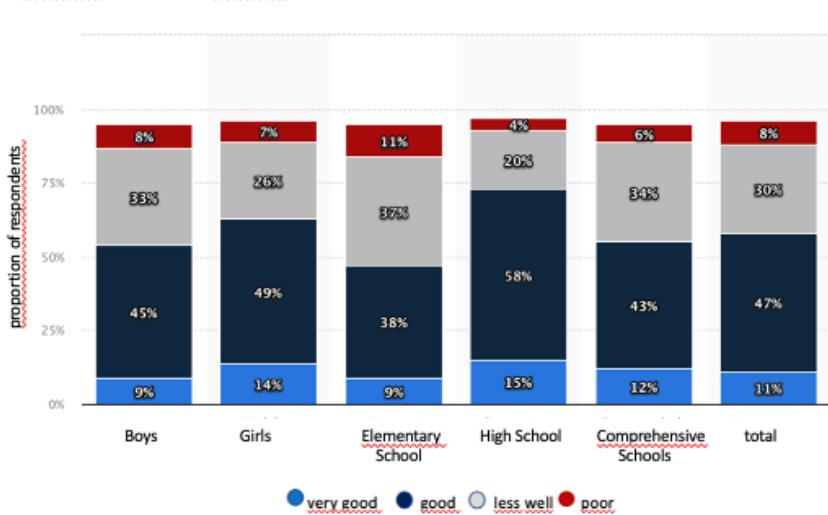
management<sup>10</sup>. Politicians who are responsible are in charge to answer the question of why none of these tools or instruments were used and why, given the reliable forecasts from spring and summer 2020, no energetic and consistent action was taken. Unfortunately, things are not going well in the second winter of Covid-19 in 2021/2022. A clear strategy is still not discernible. Rather, the observer has the impression that things are being driven “on sight” – even though the Robert Koch-Institute regularly publishes updated strategy papers<sup>11</sup>.

### Impacts on society

Looking specifically at the situation of children, adolescents and young adults, initial studies show that distance learning has hardly made so many positive contributions to knowledge transfer<sup>12</sup>. Therefore, many students may have lost a year of their life. Chart 2 shows the level of efficiency of home schooling, broken down by gender and type of school.

Chart 2

Efficiency in homeschooling by gender and type of school in Germany 2021 / 1,071 students  
 / students in grades 5 through 10



<https://de.statista.com/statistik/daten/studie/1255546/umfrage/corona-krise-effizienz-im-homeschooling/#statisticContainer>

In summary, we can say that more than one third of the students experienced that the efficiency of homeschooling was poor or not good at all.

<sup>10</sup> Cf. e.g. Litke 2005, Schwarze 2014, Borrmann et al. Hrsg. 2021.

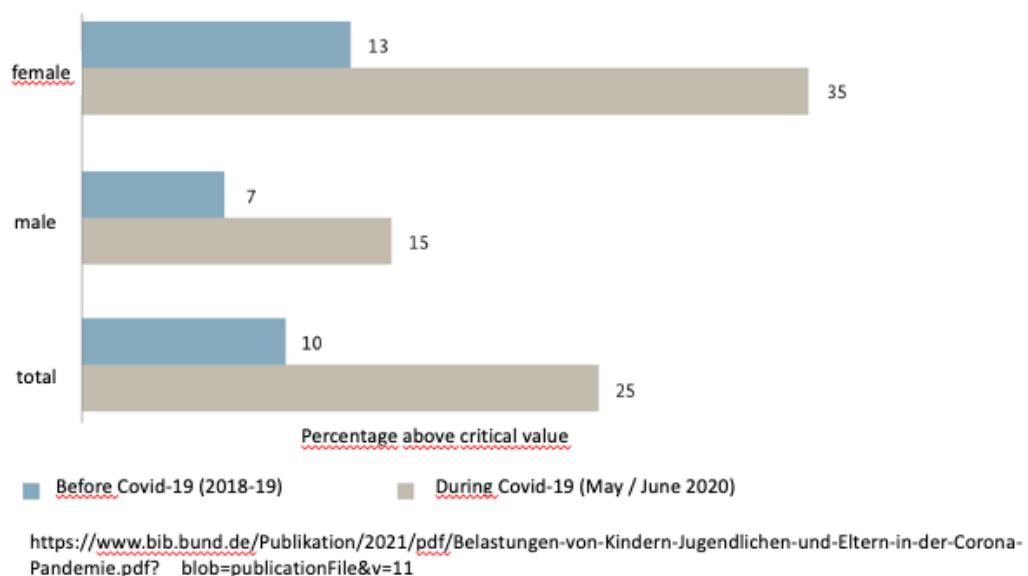
<sup>11</sup> Cf. RKI, 2022.

<sup>12</sup> Cf. OECD, 2021.

However, it is not just about learning and imparting knowledge - social contacts, which could only take place to a very limited extent, are just as important. The effects and long-term consequences are still not foreseeable. Unfortunately, initial studies show significantly stronger symptoms of anxiety, stress, and depression<sup>13</sup>. Chart 3 may give a first impression of these effects - even if the results "only" relate to the first lockdown in spring 2020. There might be some evidence, that the situation has get worse and worse till now. The increase of depression e.g., might also be a part of "Long Covid".

Chart 3

Occurrence of clinically relevant depressive symptoms in 16 to 19 year olds before and in the final phase of the first lockdown in Germany



Incidentally, depressive symptoms apply to many adults who have often reached their limits with home office and home schooling at the same time. The significant increase in domestic violence and alcohol consumption may be assessed against this background<sup>14</sup>. To quantify all of this in monetary terms i.e., "costs of the pandemic" hardly seems to be possible and would not even begin to do justice to human destiny<sup>15</sup>.

<sup>13</sup> Cf. Burjard et al., 2021.

<sup>14</sup> Cf. ibid

<sup>15</sup> Cf. Freier and Geißler, 2020.

## Impacts on economy

If we look at the development of the real economy measured in terms of gross domestic product (GDP) since the beginning of the new century, we see two strong downturns: at the beginning of the financial market crisis (-5.7 %) and the outbreak of the coronavirus (-4.6 %).

Chart 4



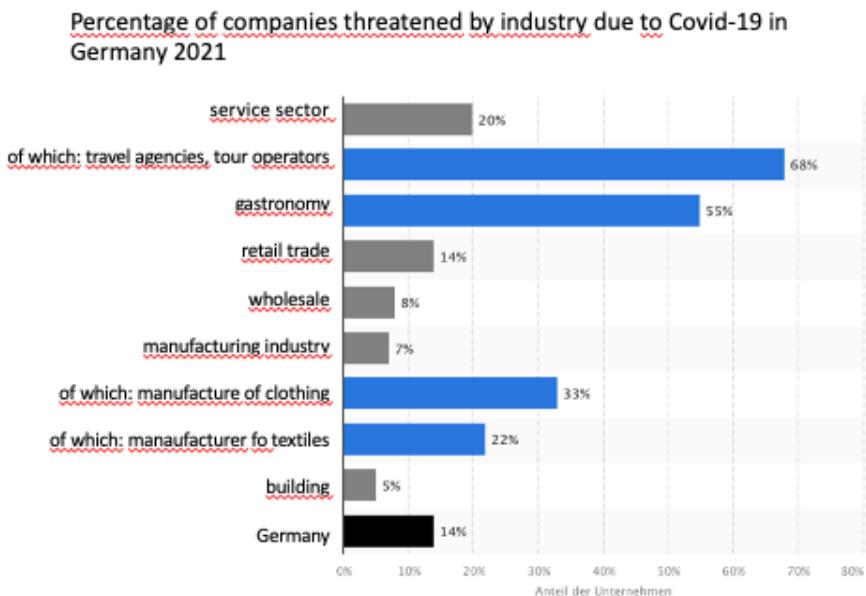
<https://de.statista.com/statistik/studie/id/101811/dokument/die-corona-pandemie/>

The effects on the real economy were cushioned in Germany by many measures, such as short-time work benefits<sup>16</sup>, the temporary suspension of the obligation to file for insolvency and various monetary assistance from Germanys development bank KfW and the 16 regional development banks - to name just a few<sup>17</sup>. However, not all companies will survive - especially small and medium-sized companies are likely to have been hit particularly hard. Chart 5 provides an overview of which sectors could be most affected by insolvencies.

<sup>16</sup> Cf. Dany-Knedlik, 2020.

<sup>17</sup> Cf. BMF, 2021.

Chart 5



<https://de.statista.com/statistik/daten/studie/1176276/umfrage/anteil-existenzbedrohter-unternehmen-nach-brachen-wegen-corona-in-deutschland/>

The most recent insolvency figures indicate a significant increase<sup>18</sup>. “Zombie companies”<sup>19</sup> leaving the market makes sense from a liberal market perspective. However, some fundamentally healthy companies will not survive either<sup>20</sup>. As a result, jobs and tax revenue are lost. In addition, to lose the job causes additional problems to people<sup>21</sup>. Right now, it is hard to estimate this type of “welfare cost”<sup>22</sup>. This is quite difficult because second and third round effects must be considered<sup>23</sup>. A current study concludes that two years of pandemic might have caused around € 350 billion through loss of value added for Germany<sup>24</sup>.

However, one figure is already quite clear. The additional debt of the federal government amounting to € 130.5 billion for 2020<sup>25</sup>. Even if the net borrowing turned out to be lower than initially assumed and the interest rate for federal securities is currently about 0 %, this will result in considerable burdens for future generations<sup>26</sup>. In 2021, new debt reached a historic level of € 240 billion.

<sup>18</sup> Cf. Rudolph.2021.

<sup>19</sup> Cf. Becker, 2021, S. 2.

<sup>20</sup> Cf. Anger and Ludowig, 2020.

<sup>21</sup> Cf. Freier & Geißler, 2020.

<sup>22</sup> Cf. BMWI, 2020.

<sup>23</sup> Cf. Maisch, 28.05.2020.

<sup>24</sup> Cf. Grömling, 2022.

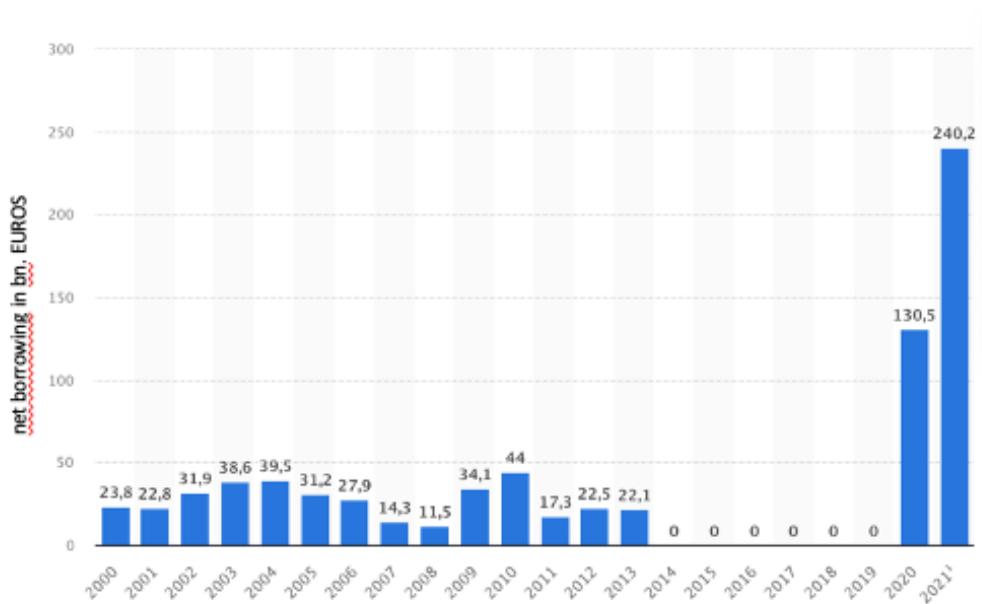
<sup>25</sup> Cf. Rudnicka, 2021.

<sup>26</sup> Cf. Finanzagentur, 2021.

Chart 6 shows the development of the net borrowing since the beginning of the millennium. After six years of the so-called "black zero" i.e., years without net borrowing, there was an increase to historically new level of net borrowing.

Chart 6

Federal net borrowing till 2021



<https://de.statista.com/statistik/daten/studie/75543/umfrage/nettokreditaufnahme-des-bundes/>

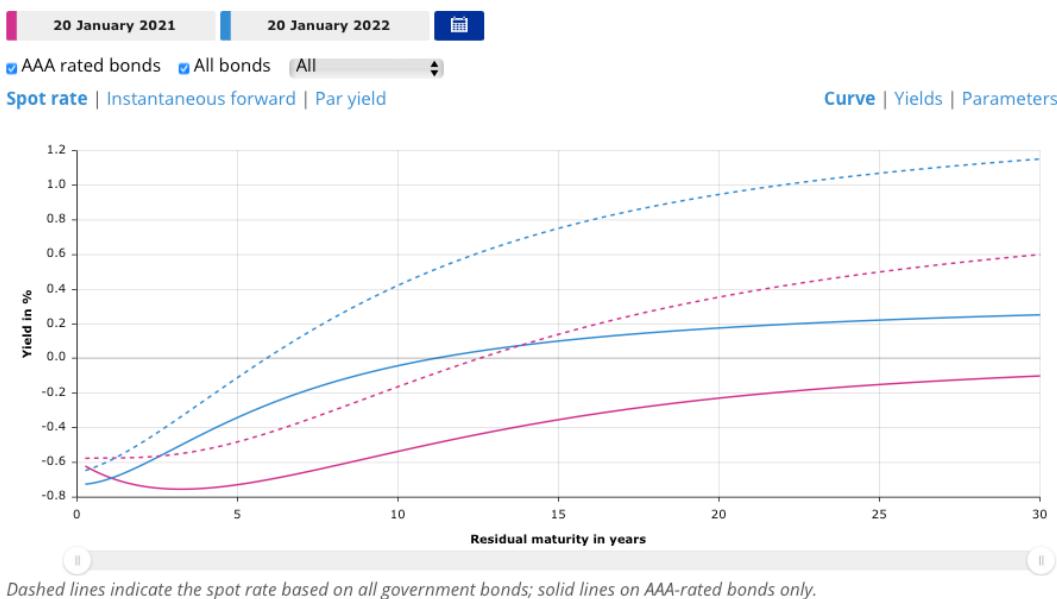
The new debt of € 99.7 billion is planned in the 2022 budget<sup>27</sup>. In total, more than € 470 billion will have to be repaid over the next few years or decades to break even again and comply with the debt brake<sup>28</sup>. Interest costs are currently negligible, but financial markets are known to be two-way streets - one day interest rates are going to rise again<sup>29</sup>. If we compare the yield structure cures from the euro zone of January 2021 and January 2022, we can already see an increase in interest rates across all maturity bands.

<sup>27</sup> Cf. no author, 2021.

<sup>28</sup> Cf. ibid.

<sup>29</sup> Cf. Daube, 2021b.

Chart 7



Let us assume, for the sake of simplicity, that € 470 billion was currently raised at cost of capital of 0 %. Additionally, let us assume these € 470 billion have an average term of five years and € 70 billion will be repaid within five years. As a results, in case interest rates increase to 2 %, an additional burden of € 8 billion for the federal budget each year must be managed. Another € 8 billion might not sound so much, but it may turn out as a great challenge<sup>30</sup> - especially since, apart from Covid-19 and the resulting consequences, significant additional expenditures by the federal government are planned e.g., for climate protection, change of energy mix, etc.<sup>31</sup>.

### Impacts on financial markets

Finally, if we look at what happened on the financial markets, we can say that the "corona crash" in March 2020 was quickly overcome and many indices have now reached new historic heights<sup>32</sup>, which can be clearly seen from the price chart of the EUROSTOXX 50.

<sup>30</sup> Cf. Haffert, 20.11.2020.

<sup>31</sup> Cf. BMF, without date.

<sup>32</sup> Cf. Braun, 2021.

Chart 8



What may seem surprising at first glance is easy to understand at second glance. Stock exchanges evaluate and trade expectations of future developments. For the current price development today's information is less important than expectations about inflation, economic growth, rate of unemployment, etc. The forecasts for 2021 and 2022 given by the German Council of Economic Experts look quite good - given today's economic and environmental conditions<sup>33</sup>. Consequently, we have some reasons to assume that the impacts of the pandemic could be overcome in the foreseeable future<sup>34</sup>.

<sup>33</sup> Cf. Sachverständigenrat, 2021.

<sup>34</sup> Cf. BMWI, 2021.

## Bibliography

- Anger, H. and Ludowig, K. (2020). Insolvenzverwalter warnen vor Zombie-Unternehmen. Retrieved 17.12.2021 from <https://www.handelsblatt.com/politik/deutschland/firmenpleiten-insolvenzverwalter-warnen-vor-zombie-unternehmen/26081428.html>
- Becker, M. (2021). Zombie Companies in the Corona Pandemic or the phenomenon of covertly over-indebted companies in Germany. IUCF Working Paper, <http://hdl.handle.net/10419/233101>. Hamburg: ZBW - Leibniz Information Centre for Economics, Kiel, Hamburg.
- BMF German Ministry of Finance. (2020). Finanzministerium rechnet mit 1,5 Billionen Euro Corona-Kosten. Retrieved 05.12.2021 from [https://www.zeit.de/politik/deutschland/2020-10/coronavirus-krise-kosten-gesundheitssystem-konjunkturprogramme-wirtschaft-wiederaufbau?utm\\_referrer=https%3A%2F%2Fwww.google.com%2](https://www.zeit.de/politik/deutschland/2020-10/coronavirus-krise-kosten-gesundheitssystem-konjunkturprogramme-wirtschaft-wiederaufbau?utm_referrer=https%3A%2F%2Fwww.google.com%2)
- BMF German Ministry of Finance. (2021). Jahreswirtschaftsbericht 2021 im Zeichen der CoronaKrise. Retrieved 10.12.2021 from <https://www.bundesfinanzministerium.de/Monatsberichte/2021/02/Inhalte/Kapitel-3-Analysen/3-4-jahreswirtschaftsbericht-2021.html>
- BMF German Ministry of Finance. (without date). Das Konjunkturprogramm für alle in Deutschland. Retrieved 17.12.2021 from [https://bundesfinanzministerium.de/Web/DE/Themen/Oeffentliche\\_Finanzen/Konjunkturpaket/Konjunkturprogramm-fuer-alle/zusammen-durch-starten.html](https://bundesfinanzministerium.de/Web/DE/Themen/Oeffentliche_Finanzen/Konjunkturpaket/Konjunkturprogramm-fuer-alle/zusammen-durch-starten.html)
- BMWI German Ministry of Economics and Climate Protection (2020). Steuerschätzer erwarten deutlich sinkende Steuereinnahmen. Retrieved 17.12.2021 from <https://www.bmwi.de/Redaktion/DE/Schlaglichter-der-Wirtschaftspolitik/2020/06/kapitel-1-10-steuerschaetzer-erwarten-deutlich-sinkende-steuereinnahmen.html>
- BMWI German Ministry of Economics and Climate Protection (2021). Jahresprojektion 2021. Retrieved 17.12.2021 from <https://www.bmwi.de/Redaktion/DE/Artikel/Wirtschaft/Projektionen-der-Bundesregierung/projektionen-der-bundesregierung-jahresprojektion-2021.html>
- Borrmann, A. et al. Hrsg. (2021). Building Information Modeling. 2., akt. Aufl., Wiesbaden 2021.
- Brandes, R. (02.05.2020). Coronakrise „Die Existenzangst vieler Menschen wird immer größer“. Retrieved 05.12.2021 from <https://www.deutschlandfunk.de/coronakrise-die-existenzangst-vieler-menschen-wird-immer-100.html>
- Braun, A. (25.02.2021). Droht der nächste Crash? Retrieved 17.12.2021 from <https://www.tagesschau.de/wirtschaft/finanzen/corona-crash-boerse-wirtschaft-101.html>
- Bujard, M. et al. (2021). Belastungen von Kindern, Jugendlichen und Eltern in der Corona-Pandemie. Retrieved 25.01.2022 from [https://www.bib.bund.de/Publikation/2021/pdf/Belastungen-von-Kindern-Jugendlichen-und-Eltern-in-der-Corona-Pandemie.pdf?\\_\\_blob=publicationFile&v=11](https://www.bib.bund.de/Publikation/2021/pdf/Belastungen-von-Kindern-Jugendlichen-und-Eltern-in-der-Corona-Pandemie.pdf?__blob=publicationFile&v=11)
- Dany-Knedlik, G. (2020). Corona-Krise: Welche Folgen hat die Pandemie für die Wirtschaft? Retrieved 10.12.2021 from <https://www.bpb.de/politik/innenpolitik/coronavirus/310192/wirtschaft>
- Daube, C. H. (2021a). Covid-19 third Wave - Impact on Financial Markets and Economy, IUCF working paper, ZBW - Leibniz Information Centre for Economics, Kiel, Hamburg. <http://hdl.handle.net/10419/>

- Daube, C. H. (2021b). Die Kosten der Pandemie. Retrieved 17.12.2021 from [https://finanzplatz-hamburg.com/de/projekte/jahrbuch.htmlhamburg.com/files/content/Downloads%20%28PDF%29/Finanzplatz-Hamburg\\_Jahrbuch-2021-1.pdf](https://finanzplatz-hamburg.com/de/projekte/jahrbuch.htmlhamburg.com/files/content/Downloads%20%28PDF%29/Finanzplatz-Hamburg_Jahrbuch-2021-1.pdf)
- Finanzagentur. (2021). Bundesanleihen ("Bunds"). Retrieved 05.12.2021 from <https://www.deutsche-finanzagentur.de/de/institutionelle-investoren/bundeswertpapiere/bundesanleihen/>
- Freier, R. and Geißler, R. (2020). Kommunale Finanzen in der Corona-Krise: Effekte und Reaktionen. Retrieved 17.12.2021 from <https://www.wirtschaftsdienst.eu/inhalt/jahr/2020/heft/5/beitrag/kommunale-finanzen-in-der-corona-krise-effekte-und-reaktionen.html>
- Grömling, M. (2022). Ökonomische Verluste nach zwei Jahren Corona-Pandemie. IW-Kurzbericht 3/2022. Retrieved 23.01.2022 from <https://www.iwkoeln.de/presse/pressemitteilungen/michael-groemling-corona-kostete-bisher-350-milliarden-euro-wertschoepfung.html>
- Haffert, L. (20.11.2020). Die "Schwarze Null" ist Geschichte. Aber hat sie eine Zukunft?. Retrieved 05.12.2021 from <https://www.bpb.de/apuz/schwarze-null-2020/319054/die-schwarze-null-ist-geschichte-aber-hat-sie-eine-zukunft>
- Impfdashboard. (2022). Retrieved 22.01.2022 from <https://impfdashboard.de>
- Kunkel, U. (2021). Wie das Virus zu uns kam. Retrieved 22.01.2022 from <https://www.zdf.de/nachrichten/panorama/corona-bayern-china-webasto-100.html>
- Litke, H.-D. (2005). Projektmanagement - Handbuch für die Praxis. München 2005.
- Maisch, M. (2020). Wie die Coronakrise Banken in Bedrängnis bringt. Retrieved 17.12.2021 from <https://www.handelsblatt.com/finanzen/banken-versicherungen/banken/gewinne-brechen-ein-wie-die-coronakrise-banken-in-bedraengnis-bringt/25867898.html>
- no author (2021). Kabinett billigt Haushaltspläne für 2022 – und Klimaschutz-Sofortprogramm. Retrieved 05.12.2021 from <https://www.spiegel.de/wirtschaft/soziales/bundesaushalt-kabinett-billigt-olaf-scholz-plaene-fuer-2022-100-milliarden-neue-schulden-a-164dded9-1e6a-455e-8655-8ce7f1c964e6>
- OECD Organization for Economic Co-operation and Development (16.09.2021). Bildung auf einen Blick 2021: OECD-Indikatoren. Retrieved 10.12.2021 from <https://www.oecd.org/berlin/publikationen/bildung-auf-einen-blick.htm>
- RKI Robert Koch-Institut (2022). COVID-19-Strategiepapiere und Nationaler Pandemieplan. Retrieved 22.01.2022 from [https://www.rki.de/DE/Content/InfAZ/N/Neuartiges\\_Coronavirus/ZSPandieplan\\_Strategien.html](https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/ZSPandieplan_Strategien.html)
- Rudolph, G. (2021). Viel mehr Privatisolvenzen. Retrieved 10.12.2021 from <https://www.tagesschau.de/wirtschaft/konjunktur/creditreform-insolvenzen-corona-101.html>
- Rudnicka, J. (19.10.2021). Nettokreditaufnahme des Bundes bis 2021. Retrieved 05.12.2021 from <https://de.statista.com/statistik/daten/studie/75543/umfrage/nettokreditaufnahme-des-bundes/>
- Sachverständigenrat German Council of Economic Experts. (2021). Deutsche Wirtschaft trotz längeren Shutdown robust — im Sommer weitere Erholung zu erwarten. Retrieved 17.12.2021 from <https://www.sachverstaendigenrat-wirtschaft.de/konjunkturprognose-2021.html>
- Schmidt, T. (2021). Gemeinschaftsdiagnose Frühjahr 2021: Pandemie verzögert Aufschwung - Demografie bremst Wachstum. Retrieved 05.12.2021 from <https://www.ifo.de/node/62767>

- Schneider, J. (2020). Darum rechnen Experten mit einer zweiten Welle. Retrieved 05.12.2021 from <https://www.zdf.de/nachrichten/panorama/coronavirus-zweite-welle-wendtner-100.html>
- Schwarze, J. (2014). Projektmanagement mit Netzplantechnik. 11., überarb. und erw., Aufl., Herne 2014.
- WHO Wealth Health Organisation (2022), WHO Coronavirus (COVID-19) Dashboard. Retrieved 22.01.2022 from <https://covid19.who.int>.