

HERTIE SCHOOL

MASTER THESIS

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**The effect of government support  
during the COVID-19 pandemic:  
Firm-level evidence from Germany**

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*Author:*

Marco SCHILDT

*Supervisor:*

Dr. Simon MUNZERT

*A thesis submitted in fulfillment of the requirements  
for the degree of Master of Data Science for Public*

April 25, 2023

Wordcount: X.XXX



HERTIE SCHOOL

# *Executive Summary*

Master of Data Science for Public

**The effect of government support during the COVID-19 pandemic:  
Firm-level evidence from Germany**

by Marco SCHILDT

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# Contents

<b>Executive Summary</b>	<b>iii</b>
<b>1 Literature Review</b>	<b>1</b>
1.1 Pandemic effects . . . . .	1
1.2 Government support effects . . . . .	2
<b>2 Government support in Germany</b>	<b>3</b>
<b>3 Data Sources</b>	<b>7</b>
3.1 Data on Government support . . . . .	7
3.2 Company level financial information . . . . .	8
<b>4 Methods</b>	<b>9</b>
4.1 KPI . . . . .	9
4.2 Diff and Diff . . . . .	10
4.3 Causal Curve . . . . .	10
<b>5 Results</b>	<b>13</b>
5.1 Diff and Diff . . . . .	13
5.2 Causal Curve . . . . .	14
<b>6 Conclusion</b>	<b>15</b>
6.1 Policy Implications . . . . .	15
6.2 Conclusion . . . . .	16
<b>A Frequently Asked Questions</b>	<b>17</b>
A.1 How do I change the colors of links? . . . . .	17
<b>Bibliography</b>	<b>19</b>
<b>Statement of Authorship</b>	<b>21</b>



# List of Figures





# List of Tables

2.1	Overview of support instruments . . . . .	5
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# List of Abbreviations

**LAH** List Abbreviations **Here**  
**WSF** What (it) **Stands For**



# Chapter 1

## Literature Review

### 1.1 Pandemic effects

Research unambiguously concluded that COVID-19 crisis negatively influenced the economy in countries around the world. Many businesses were severely affected by drops in demand and lockdowns by the authorities. The pandemic shock leads to negative cash flows for many firms (Fernández-Cerezo et al. 2021). Depending on the affectedness of the business and the cash holding, liquidity shortfalls are inescapable. Without continuation of their business and positive cash flows, firm's equity and the liquidity (cash and bank) positions will inevitably deteriorate. At some point, firms are in need of Liquidity injection, either through additional equity or via debt. However, debt, if obtainable, increases the firms leverage and could make the firm vulnerable to new liquidity shortfalls. And, additional leverage only prevents from insolvency if there is a prospect that future cash flows will enable a firm to service the additional debt. The effect of the COVID-19 outbreak is widely described as an economic shock,

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## **1.2 Government support effects**

Policy intervention to "prevent" the effects and save businesses for a fast economic recovery. First assessments were modeling approaches. Already lots of early assessments of state aid, also at a firm level. For getting a better understanding on the effect of aid schemes in Germany a paper analyses the effect of a company's cost structure on the effectiveness of aid measures (Bischof, Karlsson, Rostam-Aschar, Simon, 2021). This paper assumes that companies within the same sector have a similar cost structure. Since aid in Germany is based on the cost structure of companies, the authors conclude that based on the generalized approach of aid schemes, the effectiveness of aid is varying between business sectors.

## Chapter 2

# Government support in Germany

The Covid-19 pandemic has severely affected the entire world with many devastating consequences. Businesses in many parts of the economy were struggling to survive due to shocks in demand, lockdowns from governments and disrupted supply chains (EU COM, 2020).

To sustain the economy and prevent businesses from bankruptcy during the pandemic, the German government responded with a range of policies. Beside the various measures like labor cost subsidies, temporary changes in the insolvency law and tax reliefs, the financial support through grants and loans was unprecedented. The financial support was available for businesses in all sizes that affected by the pandemic ranging from self-employed individuals to small and medium-sized enterprises (SMEs) up to very large companies. From spring 2020 to summer 2022, grants, loans, recapitalizations and guarantees alone accounted for a total of around EUR 130 billion (BMWK, 2022). A fiscal effort of this magnitude is inconceivable under normal conditions.

Usually, governments are not permitted to provide extensive subsidies, due to concerns of distorting competing in the European single market (Claici, Eymard, and Vallée, 2022). The permissibility of subsidies is comprehensively regulated by European state aid laws. Before a subsidy is considered permissible under this legal framework an assessment of its necessity, incentive effect, proportionality and effect on trade and competition is needed (Claici, Eymard, and Vallée, 2022). In light of the ongoing pandemic, the EU relaxed rules on subsidies by introducing the Temporary Framework for State aid measures to support the economy in the current COVID-19 outbreak, by which provided national governments more freedom in order to come up with quick and extensive policy responses to support businesses (EU COM, 2020).

As part of the framework the German government had to justify the financial support measures by laying out the necessity, the appropriateness and proportionality to remedy the impact of the pandemic in the economy. Defining and deciding on the appropriateness as well as proportionality of support measures is a complex and challenging task. Due to the unpredictable scale of the pandemic, uncertainty is immense. On the other hand, the effect of support measures is nothing trivial to estimate, given that their scale was unprecedented. To ensure that the support measures are effective, efficient, a good understanding is inevitable.

The financial support measures introduced by the German government can mainly be categorized into the groups grants and loans. Grants are funds provided by the government to businesses that are not needed to be repaid. Grants are usually subject to the terms and conditions, but do not require any consideration in return. Whereas financial support measures based on loans have to be repaid, like standard bank loans. The advantage over a normal credit transaction are beneficial conditions that a company would not have received under normal circumstances from a bank. Especially not in a time where the company's future is uncertain and linked to the further development of the pandemic.

From the companies' point of view, both types of aid have the immediate effect of a liquidity injection, meaning that additional cash is available. However, in the long-term perspective the repayment obligation of loans is contrasting the effect of grants by the fact that a firm will have to service the debt and interest of the loan, regardless of whether the pandemic is over or not.



TABLE 2.1: Overview of support instruments

Beihilfeinstrument	aid
Andere Formen der Kapitalintervention	9,017,729,574.33
Bürgschaft	1,144,042,410.02
Eigenkapitalinstrumente	2,419,881,701.00
Kredite/rückzahlbare Vorschüsse	753,217,635.27
Sonstiges (bitte angeben)	14,244,894,962.69
Zinsgünstiges Darlehen	10,500,942,385.00
Zinszuschuss	9,383,307,910.00
Zuschuss	24,959,647,770.34



## Chapter 3

# Data Sources

### 3.1 Data on Government support

Research unambiguous concluded that COVID-19 crisis negatively influenced the economy in countries around the world. Many businesses were severely affected by drops in demand and lockdowns by the authorities. The pandemic shock leads to negative cash flows for many firms (Fernández-Cerezo et al. 2021). Depending on the affectedness of the business and the cash holding, liquidity shortfalls are inescapable. Without continuation of their business and positive cash flows, firm's equity and the liquidity (cash and bank) positions will inevitably deteriorate. At some point, firms are in need of Liquidity injection, either through additional equity or via debt. However, debt, if obtainable, increases the firms leverage and could make the firm vulnerable to new liquidity shortfalls. And, additional leverage only prevents from insolvency if there is a prospect that future cash flows will enable a firm to service the additional debt. The effect of the COVID-19 outbreak is widely described as an economic shock,

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## Chapter 4

# Methods

### 4.1 KPI

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## 4.2 Diff and Diff

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## 4.3 Causal Curve

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## Chapter 5

# Results

### 5.1 Diff and Diff

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## Chapter 6

# Conclusion

### 6.1 Policy Implications

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## Appendix A

# Frequently Asked Questions

### A.1 How do I change the colors of links?

The color of links can be changed to your liking using:

```
\hypersetup{urlcolor=red}, or  
\hypersetup{citecolor=green}, or  
\hypersetup{allcolor=blue}.
```

If you want to completely hide the links, you can use:

```
\hypersetup{allcolors=.}, or even better:  
\hypersetup{hidelinks}.
```

If you want to have obvious links in the PDF but not the printed text, use:

```
\hypersetup{colorlinks=false}.
```



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## Statement of Authorship

I hereby confirm and certify that this master thesis is my own work. All ideas and language of others are acknowledged in the text. All references and verbatim extracts are properly quoted and all other sources of information are specifically and clearly designated. I confirm that the digital copy of the master thesis that I submitted on 02.05.2023 is identical to the printed version I submitted to the Examination Office on 03.05.2023.

DATE:

NAME:

SIGNATURE: