Write a Data Science Blog.

How did the Covid-19 pandemic impact German society and its various social classes?

# Introduction

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The Covid-19 pandemic has caused a global health crisis that has impacted every aspect of society, including social behaviors, political decisions and overall well-being. As a data scientist, I was keen to explore how this unprecedented event has affected the German society and its different social classes. To do this, I analyzed two large datasets from the German General Social Survey (ALLBUS) for the years 2018 and 2021, with specific focus on three key factors: satisfaction with life, trust in the federal government and changes in voting behavior.

Given the extreme circumstances brought on by the pandemic, it is likely that significant changes have occurred in these areas. By analyzing the data, I aimed to identify these changes and offer insights into how the pandemic may have shifted societal attitudes and beliefs in Germany. The results of this analysis are not only of great interest to those with an academic or professional interest in the subject, but also to the wider public, as they shed light on the broader implications of the pandemic on society as a whole.

# Social Class Density

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One key factor to consider when examining societal changes brought on by the Covid-19 pandemic is how individuals perceive themselves within their respective social classes. Using data from the ALLBUS survey for the years 2018 and 2021, I analyzed how German participants self-identified within the five social classes: lower, working, middle, upper middle, and higher class.

After plotting the data as a histogram, it became evident that the distribution followed a Gaussian curve, with most participants identifying as middle class. However, two significant changes were observed between the years 2018 and 2021. The percentage of individuals identifying as middle class (Class 3) decreased from approximately 60% to 55%, while the percentage of participants identifying as upper middle class (Class 4) increased from approximately 10% to 15%.

These changes in self-identification can offer insights into how the Covid-19 pandemic has impacted perceptions of social class in Germany. It is possible that economic challenges and job losses brought on by the pandemic have contributed to a shift among some middle-class individuals towards self-identifying as working class, while others may have experienced upward social mobility due to changes in their career or financial situation. Understanding these changes in social class density is crucial for developing targeted policy responses aimed at addressing the needs of specific social groups in the wake of the pandemic.

# Question 1: Satisfaction in Live

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The Covid-19 pandemic has had a significant impact on the satisfaction with life of self-considered social classes in Germany. The analysis of the ALLBUS dataset revealed that the higher the social class, the more satisfied participants tend to be. In class 1, the median satisfaction level was 5, while in class 2 to 4 it was 8 and in the upper class 5 it was 9. These results suggest that individuals in the higher social classes are generally more content with their lives than those in the lower classes.

It is important to note that the median value was chosen to handle extreme values, indicating that some individuals may have reported either very high or very low levels of satisfaction. In class 1, only 5% of participants reported a score of 10 out of 10, while in class 5, over 60% reported the maximum score. This further emphasizes the trend that the higher the social class, the more satisfied individuals tend to be.

Interestingly, the analysis also revealed that in 2021, the satisfaction with life values were less dense than in 2018, indicating that the pandemic may have had an impact on the variability of satisfaction levels across social classes. Additionally, in classes 2, 4, and 5, there was a drastic drop of approximately one number of the scale in the median satisfaction level compared to 2018. These findings suggest that the pandemic may have had a more significant impact on the satisfaction with life of individuals in the middle to higher social classes, compared to those in the lower class.

Overall, these results highlight the significant impact of the Covid-19 pandemic on the satisfaction with life of individuals in Germany, particularly across different social classes. Further research is needed to understand the underlying factors contributing to these differences and to develop interventions to address them.

# Question 2: Trust in Government

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The analysis of the ALLBUS dataset also revealed insights into trust in the federal government in Germany before and during the Covid-19 pandemic. The CDU-CSU coalition with Angela Merkel was in power during both 2018 and 2021. In 2018, the median trust level in the federal government was 3 on a scale up to 7 for participants in class 1, and approximately 4 for those in classes 2-4. The upper class has again the highest value of 5. These results suggest that individuals in the higher social classes had a higher level of trust in the government than those in the lower class.

Interestingly, there were no significant changes in the median trust levels between 2018 and 2021. However, the shape of the distributions in both years indicate a slight drop in trust levels across all social classes in 2021 compared to 2018. Additionally, the distribution for trust levels in 2021 has a flatter shape than in 2018, which could suggest a greater variability in trust levels across social classes.

Overall, the findings suggest that while there was no significant change in the median trust level in the German federal government between 2018 and 2021, there was a slight decrease in trust levels. This could suggest a potential erosion of trust in government, especially during times of crisis like the Covid-19 pandemic. Again, in this case further research is needed to understand the underlying factors contributing to changes in trust levels, as well as to develop strategies for addressing and improving trust in government.

# Question 3: Voting Behaviour

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The analysis of the ALLBUS dataset also revealed insights into changes in voting behavior before and during the Covid-19 pandemic in Germany. The results showed that the higher the social class, the more likely individuals are to vote - with almost 90% of participants in Class 5 reporting that they voted compared to only 60% of participants in Class 1.

The analysis also revealed that participants in lower social classes are more likely to vote for right-leaning parties. In contrast, participants in higher social classes tend to vote for more centrist or left-leaning parties.

Comparing the data from 2018 and 2021, the analysis shows that, in 2021 elections, the CDU-CSU party lost significant ground across all social classes. Specifically, in Class 5, the party lost almost half of the voters. The Liberal Party (FDP) emerged as the big winner in 2021.

Additionally, there was a general decline in the willingness to vote in 2021 across all social classes. In Class 1, for example, the participation rate dropped from 60% to 50%. This decline in participation rates might be due to protests or dissatisfaction with the political system and candidates.

The findings suggest that voting behavior is influenced by social class, and that changes in voting patterns may occur during times of crisis, such as the Covid-19 pandemic. Understanding these trends is important for policymakers to develop targeted interventions and policies that address the needs and values of different social groups. These insights may also help political parties and candidates better understand their constituencies and adapt their messaging and policies to appeal to specific social groups.

# Review

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Upon reviewing the article, it seems that the analysis presented is primarily focused on descriptive analytics and limited in scope to only a few variables related to Covid-19. While the findings are interesting, it would be beneficial to include a wider range of variables to paint a more complete picture of the changes in German society and its social classes.

Additionally, it is important to consider that changes in society may not solely be attributed to Covid-19 and its impacts. Other factors such as economic trends, political events, and social movements could also contribute to changes in self-identification within social classes.

It is also important to note that participants' subjective perceptions of their social class may not always align accurately with their actual social class. Some individuals may consider themselves to be in a higher social class than they actually are, which could potentially affect the results of this analysis.

Overall, the article serves as a valuable starting point for understanding the impact of the pandemic on social class identity in Germany. However, to develop a more complete understanding of societal changes during this period, incorporating a wider range of variables and considering external factors beyond Covid-19 would be beneficial.

# Conclusion

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In conclusion, the analysis of two large datasets from the German General Social Survey (ALLBUS) for the years 2018 and 2021 showed significant changes in satisfaction with life, trust in the federal government, and voting behavior in Germany during the Covid-19 pandemic. The findings suggest that the Covid-19 pandemic has had a significant impact on the perception of social class, with some individuals experiencing upward mobility, and others identifying more with the working class. The analysis also revealed that trust in the federal government slightly decreased across all social classes, indicating a potential erosion of trust in government, especially during times of crisis.

Moreover, the study revealed that voting behavior is influenced by social class, with individuals in higher social classes tend to vote for more centrist or left-leaning parties, while those in lower social classes tend to vote for right-leaning parties. The 2021 election results showed a decline in the willingness to vote across all social classes, which may be related to political protest or dissatisfaction with the political system.

These findings suggest that the Covid-19 pandemic has had significant effects on society in Germany, highlighting the importance of understanding how different social classes experienced the pandemic and how it has altered their attitudes and beliefs. These insights can be valuable for policymakers to develop targeted interventions and policies that address the needs of specific social groups and promote overall well-being. Furthermore, political parties and candidates can use this information to better understand their constituents and tailor their messaging and policies to appeal to the changing needs and values of society.