The Impact of the 2008 Economic Crisis and Post-Crisis Policies on Inequality in the United States and Germany

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Abstract

This thesis explores the multifaceted impacts of the 2008 financial crisis on economic inequality, focusing on the comparative analysis of the United States and Germany. Specifically, it scrutinizes the implementation and consequences of the Troubled Asset Relief Program (TARP) in the United States and the Financial Market Stabilization Act (FMStG) in Germany. The study evaluates the policy impact and contributes to understanding how government actions can influence economic disparity and inform future decisions. Moreover, the research delves into how these crucial interventions not only aimed at stabilizing the financial systems but also how they inadvertently affected social equity across different demographics.

Employing the theory of social equity as a lens, the research critically assesses the alignment of crisis management policies with the principles of fairness and intergenerational justice. It investigates whether these interventions provided short-term economic relief at the expense of long-term social inequality. Furthermore, the analysis extends to the role of government actions in shaping the distribution of economic opportunities and burdens during and after the crisis.

The thesis also considers the broader implications of these policies for future generations, exploring how decisions made during times of economic distress can set precedents that affect subsequent policy formulations aimed at mitigating economic disparities. By examining the balance between market regulation and social equity, especially across generations, the research offers insights into how the U.S. and Germany addressed economic challenges and fairness during the crisis. Through a detailed examination of policy outcomes in both countries, this study contributes valuable insights into the dynamics of economic policy and social equity, offering recommendations for crafting more equitable economic policies in the face of future financial crises.

1. Introduction

The global economic crisis of 2008, also known as the Great Recession, was a pivotal moment in economic history, comparable to the Great Depression of the 1930s. It shook financial systems worldwide, disrupted trade and market operations, and led to a major rethinking of economic strategies and concepts. This research work aims to explore the actions taken in response to this crisis, especially how they shaped economic inequality in the United States (U.S.) and Germany, two countries known for their distinct economic systems.[1]

The U.S. is known for its free-market approach, where markets are expected to function with little government involvement, and economic differences among people are often accepted, based on the belief that the economy will eventually balance itself. However, the crisis revealed the weaknesses of having too little regulation and resulted in the government stepping in significantly, for example by rescuing banks and introducing financial support initiatives. This unusual level of government involvement led to new discussions about the government's role in managing the economy and addressing inequality.

Germany mixes free-market principles with strong social policies, trying to ensure fairness without compromising economic performance. This model was put to the test during the crisis, as Germany had to deal with economic challenges while upholding its commitment to social well-being.[2]

This research investigates the 2008 crisis, specifically focusing on the bailout programs implemented by the U.S. (The Troubled Asset Relief Program) and German governments (Emergency Economic Stabilization Act) and the effects of these policies on the economy. The historiographical debate surrounding financial crises and government policy is extensive and multifaceted. Scholars such as Reinhart and Rogoff (2009) argue that financial crises are a recurring feature of global economic history, often resulting from a combination of excessive debt accumulation and economic mismanagement. Their work, "This Time is Different" emphasizes the cyclical nature of financial crises and the common patterns that precede them.[3]

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[1] Tooze, A. (2018). *Crashed: How a decade of financial crises changed the world*. Penguin, p. 2-13.

[2] Tooze, A. (2018). *Crashed: How a decade of financial crises changed the world*. Penguin, p. 94-98, 422-423; van Bavel, B. (2016). *The Invisible Hand? How Market Economies have Emerged and Declined Since AD 500*. Oxford. Oxford Academic, p. 246.

[3] Reinhart, C. M., & Rogoff, K. S. (2009). *This time is different: Eight centuries of financial folly*. Princeton university press.

On the other hand, Stiglitz (2010) critiques the policy responses to these crises, particularly the emphasis on austerity measures and the lack of adequate regulatory frameworks. In his book "Freefall", Stiglitz argues that the 2008 crisis was largely a result of deregulation and the failure of market-driven policies, calling for more robust government intervention to prevent such crises in the future.[4]

Kindleberger and Aliber (2011), in "Manias, Panics, and Crashes" provide a historical perspective on financial crises, highlighting the psychological and behavioral aspects that contribute to financial bubbles and subsequent crashes. They stress the importance of understanding the human element in financial markets and the role of speculative behavior.[5]

Adam Tooze's "Crashed: How a Decade of Financial Crises Changed the World" (2018) adds another layer to this debate by examining the global impact of the 2008 crisis and the interconnectedness of international financial systems. Tooze provides a comprehensive analysis of how the crisis unfolded and the varied responses by different countries. He emphasizes the geopolitical ramifications and the long-term effects on global economic governance.

In reflecting on the 2008 crisis's aftermath, we are going to rethink again the essential values that steer our economic systems. Through this comparative study, the thesis intends to deepen our understanding of the intricate relationship between economic structures and inequality, providing insights that could inform decision-makers, economists, and the general public as we strive for economies that are fairer and more capable of withstanding future crises. This thesis aims to contribute to this ongoing debate by providing a comparative analysis of the United States and Germany. By examining how these two major economies responded to the 2008 crisis, the study seeks to shed light on the effectiveness of different policy measures and their impact on economic inequality.

1.1 Research Question and Scope of Research

The main question this research aims to answer is critical to understanding the wider effects of the 2008 financial crisis on society and the economy. Therefore, the following main research question has been formulated:

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[4] Stiglitz, J. E. (2010). *Freefall: America, free markets, and the sinking of the world economy*. WW Norton & Company.
[5] Aliber, R. Z., Kindleberger, C. P., & McCauley, R. N. (2015). *Manias, panics, and crashes: A history of financial crises*, Basingstoke: Palgrave Macmillan.

- **How could the policies put in place in the U.S. – Emergency Economic Stabilization Act of 2008 and Germany – Finanzmarktstabiliserungsgesetz (FMStG) after the 2008 financial crisis have influenced economic inequality?**

This study will look into the complex set of actions taken by these countries and examine how they affected social and economic divisions. This is important because economic inequality is not just about the difference in earnings or wealth; it also shapes society, influences political conversations, and affects how people live and the overall health of a country's democracy.

To tackle the main question, the study will explore the following related sub-questions:

1. *What were the key policy measures adopted in each country?*
2. *How did these policies differ in their approach and implementation between the U.S. and Germany?*
3. *After the 2008 financial crisis, how have the immediate policy responses focusing on short-term stabilization affected economic inequality in the U.S. and Germany?*

Regarding the first research question, the research will essentially look at the type of these policies and what goals they aimed to achieve.

Consequently, in the second research question, the study will look closely at the range of these policies, how they differ in their essence and how they impacted GDP and unemployment rate in each respective country. It will consider how much money was spent, which parts of the economy and groups of people were focused on, and how this all came together after the crisis. This will give a detailed picture of the policy environment that formed as a result of the crisis and what values and priorities were behind these decisions.

Thirdly, the study will look at the results of these policies, right after they were put in place and in the years that followed. It will use data and numbers to measure shifts in inequality. Furthermore, the study will tell apart the immediate effects of the crisis measures and the long-term changes that impacted future generations. In this research, we will focus specifically on education budget cuts as one of the result of the financial crisis. Education is a critical area that directly impacts future generations, influencing their opportunities and long-term economic well-being. By examining the effects of budget

cuts in education, we can gain valuable insights into how financial crises affect the foundational aspects of society and the future potential of its citizens.

Overall, by addressing these questions, the research will provide insights into how the policies implemented in response to the financial crisis have shaped economic inequality.

Based on the comparative analysis of the economic responses of the U.S. and Germany to the 2008 financial crisis, this study proposes two key hypotheses. First, the economic policies implemented in the U.S. and Germany will result in increased economic inequality. Second, both the U.S. and Germany will encounter challenges in maintaining intergenerational equity. These hypotheses will guide the analysis, aiming to uncover the extent to which these economic policies have shaped inequality and intergenerational equity in both countries.

2. Methodological Approach

This research project will be organized into distinct but interconnected sections, starting with an introduction and followed by a review of existing research, an explanation of the methods used, an analysis in the chapter 4, including responding each research subquestion in the separate respective subchapter, a discussion of what was discovered, and finally, a conclusion. This layout is designed to create a clear and logical progression, building step by step towards a detailed understanding of how the policies after the financial crisis have influenced economic differences in the countries being studied. The lack of comparative studies between the U.S. and Germany that examine the long-term impacts of crisis management policies on economic inequality were idetified as the gap in the literature since the most existing research focuses on short-term effects or on single countries, which limits our understanding of how different policies affect inequality over time.

Given the focus on economic inequality and the impact of legislative measures, studying the legislative documents will be essential to understand the specific provisions and intended goals of the policies. The selection of policies in the U.S. and Germany for analysis was based on their significance in mitigating the 2008 economic crisis and their roles in bank bailouts. Both countries implemented measures aimed at slowing the crisis's impact and stabilizing their financial systems by providing support to major banks. These policies are key examples of government intervention during economic downturns, and therefore, provide a valuable comparative study of different approaches to crisis management and their implications for economic inequality.

For the purpose of this study, a multifaceted approach has been taken. The theory of social equity, developed and shaped by H. George Frederickson, is particularly important within the context of public administration while at the core of this research is a detailed comparison that will highlight not just the policies each country put in place but, more crucially, the effects these policies had.

2.1 Theoretical Framework – Theory of Social Equity

According to Johnson & Svara (2011), social equity involves a strong commitment to fairness, justice, and equality in creating public policies, distributing public services, implementing policies, and managing institutions that serve the public, either directly or through contracts. Public administrators and all those involved in public governance should strive to prevent and reduce inequality, unfairness, and injustice based on key social characteristics. They should also promote greater equality in access

to services, ensure procedural fairness, improve the quality of services, and achieve better social outcomes.[6]

The development of social equity theory has been shaped by various scholars and key milestones. John Rawls' "A Theory of Justice" (1971) provided a philosophical foundation by advocating for equal rights and opportunities, and promoting the interests of the least advantaged members of society. Rawls' concept of the "veil of ignorance" and his principles of "justice as fairness" have been instrumental in shaping the discourse on social equity. Moreover, H. George Frederickson is widely recognized for originating the concept and extensively contributing to its development and application as he further advanced the theory by integrating it into public administration. According to Frederickson, social equity is one of the fundamental pillars in public administration, alongside efficiency and economy, focusing on the fairness of organizational management and the delivery of public services. Frederickson's work underscored the need to address disparities in access, quality, and outcomes of public services to achieve true equity. A critical issue arises when policies are implemented without considering social equity: the potential for intergenerational inequities. Policies that do not address the needs of future generations can create long-term disadvantages, perpetuating cycles of inequality. For example, budget cuts in education can limit access to quality education for future generations, leading to disparities in skills and opportunities. Similarly, inadequate healthcare policies can result in poorer health outcomes for successive generations.[7]

For a comprehensive understanding of the origins, developments, and applications of social equity theory in public administration, Frederickson's book "Social Equity and Public Administration: Origins, Developments, and Applications" is a key resource. Frederickson's contributions have laid the groundwork for integrating social equity into public administration education and practice, highlighting its importance in creating fair and equitable public services and policies. This body of work not only defines the theoretical underpinnings of social equity but also offers practical applications and future directions for incorporating these principles into public administration and policy-making. [8] This theory has evolved over the past four decades, with Frederickson and others

[6] Johnson, N. J., & Svara, J. H. (2011). Justice for all : promoting social equity in public administration. M.E. Sharpe, p. 282.
[7] Svara, J. H., & Brunet, J. R. (2020). The importance of social equity to prevent a hollow public administration. *The American Review of Public Administration*, *50*(4-5), 352-357; Gooden, S., & Starke, A. (2021). Social equity and public administration. In *Handbook of theories of public administration and management* (pp. 43-53). Edward Elgar Publishing.
[8] Frederickson, H. G. (2015). *Social equity and public administration: Origins, developments, and applications: Origins, developments, and applications*. Routledge.

exploring its implications in various policy arenas and public administration issues, such as administrative discretion, legal contexts, and the challenges of research in social equity. [9]

2.2 Comparative Approach

The comparative approach is a research method that involves comparing two or more cases or entities to understand their differences and similarities. This method helps to identify patterns, causes, and effects by looking at how different factors operate in various contexts. By comparing the U.S. and Germany, we can gain insight into how each country responded to the 2008 financial crisis. Both countries have distinct economic systems and policies, and comparing them helps us understand which approaches were more effective in addressing economic inequality. This method also enables policymakers to learn from the experiences of other countries. By understanding what worked or didn't work in the U.S. and Germany, future policies can be designed to be more effective in managing economic crises and reducing inequality. Moreover, this approach provides a contextual understanding of how historical, social, and economic contexts influence policy outcomes. Insights gained from comparing these two major economies can be applied to other countries facing similar crises.[10]

Therefore, the comparative analysis is central to this study, offering a chance to look closely at the outcomes and effectiveness of different approaches to managing the crisis. This comparison can shed the light on the link between the policies implemented and the levels of economic inequality that followed, providing a clear academic narrative that is accessible and informative. When comparing applied governmental policies, the Troubled Asset Relief Program (TARP) and the Financial Market Stabilization Act (FMStG), it's essential to follow a structured approach. This ensures a thorough and objective analysis, allowing others to replicate the research and reach similar conclusions. In this thesis, we will critically examine these two acts to identify their similarities and differences (Purpose and Goals, Establishment of Funds, Authority and Administration, Funding and Financial Instruments, Oversight and Accountability).

From a social equity perspective, the Troubled Asset Relief Program (TARP) can be analyzed in terms of fairness and the distribution of resources. Critics argue that TARP represented a significant transfer of wealth from taxpayers to financial institutions, benefiting the latter at the expense of the broader

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[9] Svara, J. H., & Brunet, J. R. (2020). The importance of social equity to prevent a hollow public administration. *The American Review of Public Administration*, *50*(4-5), 352-357; Gooden, S., & Starke, A. (2021). Social equity and public administration. In *Handbook of theories of public administration and management* (pp. 43-53). Edward Elgar Publishing.
[10] Lange, M. (2012). Comparative-historical methods. Sage Publications.

public. This raises questions about the equity of government intervention in the financial sector, where large corporations receive substantial support while individual citizens faced foreclosure and unemployment.[11] TARP is a primary source that offers direct insight into the legislative framework designed to stabilize the U.S. financial system during the 2008 financial crisis. This document is critical for understanding the specific provisions, intended goals, and the extent of government intervention in the financial markets. However, while the Act provides comprehensive details on the legal and operational mechanisms of TARP, it is essential to cross-reference it with secondary sources and empirical data to evaluate its actual impact on economic inequality and financial stability. The Act itself does not provide an analysis of the outcomes or long-term effects of the policies implemented.

The Financial Market Stabilization Act (FMStG) was Germany's response to the financial crisis, establishing a framework for stabilizing financial markets through measures such as guarantees, recapitalizations, and the purchase of troubled assets from banks. This primary source outlines the German government's strategies for stabilizing financial institutions and maintaining market confidence. It is indispensable for understanding Germany's policy approach, including the specifics of the financial instruments and guarantees provided. This act aimed to prevent the systemic risk that threatened Germany's financial system and broader economy. Through the lens of social equity, the FMStG can be seen as an effort to maintain economic stability and protect the welfare of the population. The act focused on preventing financial institution failures that could lead to widespread job losses, economic downturn, and social hardship.[12]

In both cases, social equity theory encourages examining who benefits and who bears the cost of these policies. It questions whether the interventions promote fairness, reduce disparities, and ensure that the burdens and advantages of government actions are distributed equitably among different social groups. While aimed at stabilizing the financial system and preventing broader economic fallout, these policies also reflect the challenges of balancing efficiency and equity in times of crisis.

Critically, social equity theory would advocate for policies that not only stabilize the economy but also address the underlying inequalities that may be exacerbated by such crises. Policies on economic issues must be designed to prevent the disproportionate burdening of future generations, or financial obligations that result from today's decisions. From an intergenerational perspective, social equity

[11] Tooze, A. (2018). *Crashed: How a decade of financial crises changed the world*. Penguin, p. 180-184.
[12] Federal Financial Supervisory Authority. (2008, October 17). Act on the Establishment of a Financial-Market Stabilisation Fund. BaFin.; Lesch, H., Vogel, S., & Hellmich, P. (2017). *The State and Social Partners Working Together: Germany's Response to the Global Financial and Economic Crisis*. Geneva: ILO, p. 4.

theory would advocate for policies that ensure future generations inherit a society that is not disadvantaged by the actions taken in the present.[13]

In the context of financial crises like that of 2008, a social equity lens focused on intergenerational issues would critique measures like TARP or FMStG not just for their immediate effects on different social groups, but also for their long-term implications. It would question whether such interventions are creating unsustainable debt or economic conditions that future generations will have to resolve.

Moreover, Adam Tooze's book, "Crashed: How a decade of financial crises changed the world", being a secondary source, offers an extensive look at the deep effects of the crisis and how it influenced the world, it will serve as an empirical groundwork for this thesis. The book provides insights into how political leaders attempted to halt the crisis through policy measures and offers a thorough explanation of the causes of the crisis. Tooze critiques the strategies adopted post-crisis, detailing the actions of major countries globally. Additionally, the book discusses various government proposals related to securing loans for bailing out indebted banks. Tooze's analysis reveals that the U.S. and Germany faced distinct political and economic issues leading up to the crisis. Tooze delves into the deregulation of the financial system, allowing major banks in the U.S., Europe, and beyond to pursue investments with little regulatory oversight, setting the stage for the crisis. [14] Tooze's analysis helps contextualize the primary sources by providing insights into the broader impacts and the effectiveness of the policies enacted during the crisis.

Furthermore, Thomas Piketty's "The Economics of Inequality" offers an in-depth analysis of the causes and consequences of economic inequality. Piketty discusses how inequality can be measured and traces its evolution over time, emphasizing the importance of understanding various income types, including wages, self-employment income, pensions, social transfers, and capital income. Additionally, he examines the historical divide between capital owners and labor earners, highlighting how the unequal distribution of capital is a primary cause of inequality and discussing the implications for social justice and economic efficiency. He highlights the roles of education, technology, and labor market policies in shaping income distribution. Finally, the book explores the tools available for reducing inequality, such as taxes and social transfers. Piketty argues for progressive taxation and efficient redistribution policies that do not distort economic incentives.[15] Early signs of these problems implied that the crisis

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[13] Frederickson, H. G. (2015). *Social equity and public administration: Origins, developments, and applications: Origins, developments, and applications.* Routledge, p. 85-100.
[14] Tooze, A. (2018). *Crashed: How a decade of financial crises changed the world*. Penguin, p. 26-30, 92-98.
[15] Piketty, T. (2015). *The Economics of Inequality: Harvard University Press*. Harvard University Press.

was somewhat predictable.[16] This connects with H. George Frederickson's concept of social equity by questioning whether policy responses to the crisis were equitable across society and if they adequately considered the welfare of future generations.

[16] Sinai, A., Orszag, P. R., & Rubin, R. E. (2004, January 5). *Sustained budget deficits: Longer-run U.S. economic performance and the risk of financial and fiscal disarray.* Brookings.

3. Literature Review

3.1 What is a financial crisis and how does it occur?

Over the past 250 years, the United States and the world have experienced many severe economic and financial crises. These include the panic of 1792, the Latin American crisis of 1825, the global crisis of 1857 triggered by railroad stocks, and the banking crisis of 1907. In 1929, another major crisis occurred, commonly known as The Big One, though today it might just be considered one of many significant crises. In short, five major crises have caused widespread damage similar to what was seen in 2007–2008. Although no one wants such crises to happen again, we still do not know how to prevent them in the future.[17]

The global financial crisis of 2007-2009 highlighted the complex and multifaceted nature of financial crises, impacting countries of all sizes and economic statuses. Although financial crises share common characteristics, they manifest in diverse forms. Typically, a financial crisis is associated with significant fluctuations in credit volumes and asset prices, as well as major disruptions in financial intermediation and the supply of external financing. While some factors driving these crises are well-documented, pinpointing their deeper causes remains challenging. Various theories have been proposed to explain the underlying causes of financial crises. Often, these crises are linked to fundamental issues such as macroeconomic imbalances and internal or external shocks. However, many questions about their exact causes persist. Some financial crises seem to be driven by "irrational" factors, including sudden bank runs, contagion and spillovers among financial markets, limits to arbitrage during stressful periods, and the emergence of asset busts, credit crunches, and fire sales. These elements contribute to the financial turmoil experienced during crises. In essence, while significant progress has been made in understanding the dynamics of financial crises, their unpredictable and multifaceted nature continues to pose challenges for economists and policymakers. The complexity of these crises underscores the importance of ongoing research and adaptive policy responses to mitigate their impact on the global economy.[18]

The events of 2008 have become a significant part of history, yet they still astonish us. Within months, a series of severe shocks hit the global financial system – events typically expected to occur only once in a century. The warning signs appeared in 2007, with increasing pressure in the subprime securities

[17] O'Halloran, S., & Groll, T. (Eds.). (2019). *After the crash: financial crises and regulatory responses*. Columbia University Press, xi.
[18] Claessens, M. S., & Kose, M. A. (2013). *Financial crises explanations, types, and implications*, p. 4-5.

market. In March 2008, the investment bank Bear Stearns collapsed. The situation worsened. In early September 2008, the U.S. government took control of Fannie Mae and Freddie Mac, two major entities supporting U.S. mortgage lending. Then, in mid-September 2008, Lehman Brothers, a prominent investment bank, collapsed. It wasn't just investment banks in trouble. American International Group (AIG), the largest insurer in the U.S., nearly failed due to risky bets on complex financial securities. It survived only because of massive bailouts from Washington D.C. The underlying issue was a global liquidity bubble which meant an easy access to cheap borrowing.[19]

In the work "Manias, panics and crashes: A history of financial crises", Kindleberger offers a simple definition of a bubble as 'an upward price movement that then implodes'. Excessive money and credit have often been blamed for causing historical bubbles. Low interest rates can make traditional assets less attractive, leading investors to buy speculative assets to get higher returns (Acharya & Naqvi; Becker & Ivashina)[20]. However, Von Hayek[21] argues that stock-market bubbles are caused by artificially cheap credit, which leads to investment in projects that are not sustainable. When interest rates rise and credit becomes harder to get, these projects fail, causing a stock-market crash. Allen & Gale[22] suggest that the banking system can encourage bubbles by lending out money that isn't theirs and letting borrowers take on debt that isn't their own. This means that neither banks nor borrowers fully bear the risks of their investment choices. Bubbles are also closely linked to credit expansions. Jordá et al.[23] show that, over the past 140 years, housing bubbles have been much more likely to occur when mortgage credit is cheap and easy to get. This increases the risk of a financial crisis.[24]

Global liqudity bubble in 2008 stemmed from low interest rates in key economies like Japan and the U.S., and significant financial support for the U.S. from China. This supply of easy money had real-life impacts. Low inflation, aided by the influx of goods from Asia, combined with low US interest rates and Asian investment in the U.S. Treasury securities, made mortgages affordable. This encouraged people to buy homes, fueling a housing price bubble. Other assets, such as stocks, also rose to unsustainable levels.[25] For more details about the role of mortgage securitization see Annex 1.

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[19] Insights, O. E. C. D. (2010). *From crisis to recovery. The causes, course and consequences of the Great Recession*, p. 18-19; Tooze, A. (2018). *Crashed: How a decade of financial crises changed the world*. Penguin, p. 11-12.
[20] Acharya, V., & Naqvi, H. (2019). On reaching for yield and the coexistence of bubbles and negative bubbles. Journal of Financial Intermediation, 38, 1–10; Becker, B., & Ivashina, V. (2015). Reaching for yield in the bond market. Journal of Finance, 70(5), 1863–1902.
[21] von Hayek, F. (1935). Prices and production (2nd ed.). G. Routledge and Sons.
[22] Allen, F., & Gale, D. (1999). Bubbles, crises, and policy. Oxford Review of Economic Policy, 15(3), 9–18.
[23] Jordá, Ó., Schularick, M., & Taylor, A. M. (2015b). Leveraged bubbles. Journal of Monetary Economics, 76, S1–S20.
[24] Quinn, W., & Turner, J. D. (2020). Bubbles in history. Business History, 65(4), 636–655.
[25] Insights, O. E. C. D. (2010). *From crisis to recovery. The causes, course and consequences of the Great Recession*, p. 18-19; Tooze, A. (2018). *Crashed: How a decade of financial crises changed the world*. Penguin, p. 11-12.

The 2007–2009 financial crisis and the ensuing market turmoil had far-reaching effects beyond the U.S. financial institutions that triggered the initial shock. The crisis caused bank balance sheets to shrink, leading to significant cuts in credit for businesses and households, labour market restructuring, and major changes to local, state, and federal budgets. It also led to unconventional monetary policies, a drop in real GDP growth, and a prolonged economic recovery. The liquidity crisis that began in the U.S. quickly spread to other countries. The sudden drop in lending and demand disrupted the global supply chain, contributing significantly to the Great Recession of 2008–2010. These global effects fueled the European Sovereign Debt Crisis, destabilizing Portugal, Ireland, Greece, and Spain, as well as eurozone banks holding illiquid government debt and U.S. mortgage-backed securities. This created a negative feedback loop in global capital markets with no clear end in sight. The crash's lingering effects even reached emerging markets, pushing some fragile economies to the brink of collapse.[26]

3.2 The U.S. economy and how we came to a crisis

After World War I, the American economy grew rapidly in the 1920s but faced severe downturns during the Great Depression of the 1930s. Post-World War II, significant growth was driven by industrialization and consumer spending. Deregulation and globalization in the 1980s and 1990s further expanded the free market. The housing market has been crucial, with long-term loans expanding homeownership. However, many savings and loan banks failed in the early 1980s, leading to costly bailouts and deregulation. Government-sponsored enterprises like Fannie Mae and Freddie Mac later became key players, contributing to the subprime mortgage crisis starting in 2007. This crisis exposed the inadequacy of U.S. regulatory tools to handle nonbank financial firms, unlike other countries with more robust emergency powers, highlighting the limitations of the Federal Reserve's monetary policy in addressing specific financial system needs.[27] For more details, see Annex 2.

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[26] O'Halloran, S., & Groll, T. (Eds.). (2019). *After the crash: financial crises and regulatory responses*. Columbia University Press, 2-3.

[27] Jaffee, D., & Quigley, J. M. (2013). *The future of the government-sponsored enterprises: The role for government in the US mortgage market.* In E. L. Glaeser & T. M. Sinai (Eds.), *Housing and the financial crisis* (pp. 361-417). University of Chicago Press; Tooze, A. (2018). *Crashed: How a decade of financial crises changed the world*. Penguin.; Alvarez, S. G., Baxter, T. C., Jr., & Hoyt, R. F. (2020). *The legal authorities framing the government's response.* In B. Bernanke, T. F. Geithner, H. M. Paulson, & J. N. Liang (Eds.), *First responders: Inside the U.S. strategy for fighting the 2007-2009 global financial crisis* (pp. 144-170). Yale University Press.

3.2.1 Troubled Asset Relief Program (TARP)

In 2008, a financial regulation law, the Emergency Economic Stabilization Act (EESA) passed to stabilize the economy following the 2008 recession and prevent further economic disruption. The law authorized the U.S. Department of the Treasury to purchase up to $700 billion in troubled assets through the Troubled Asset Relief Program (TARP). On October 3, 2008, EESA was signed by President George W. Bush and became Public Law 110-343.[28]

TARP was designed to stabilize the financial sector by purchasing troubled assets and injecting capital into banks and other financial institutions. Its main goals were to restore confidence in the financial markets, unfreeze credit markets, protect homeownership and preserve home values, and promote economic growth and job creation.[29] We will try to explain the situation using more simple terms, imagine your school has a big library where students can borrow books. One day, the library finds out that many students haven't returned their books, and now there aren't enough books for everyone to use. This makes the whole school worried because students need these books for their homework and projects. To fix this problem, the principal decides to create a special program. The principal collects money from different parts of the school budget and uses it to buy more books and help the library. This way, the library can have enough books for everyone, and students won't have to worry about not finding the books they need. In this example, the principal’s program is like TARP. The library is like the banks and companies, and the books are like money. TARP was a program where the government used taxpayer money to help big banks and companies that were in trouble, so the economy could keep running smoothly and people could continue to borrow money and do business.

As of January 23, 2009, the Treasury had announced plans to use $387.4 billion of the $700 billion from TARP. By that date, it had committed to spending $299.96 billion, and $293.76 billion had already been spent. This means that about 42% of the total TARP funds had been allocated by the time of the announcement.[30]

The Treasury used TARP to support U.S. financial institutions and companies through five main programs:

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[28] U.S. Department of the Treasury. (2009). Initial Report to the Congress: Office of the Special Inspector General for the Troubled Asset Relief Program (SIGTARP); 30.
[29] U.S. Congress. (2008). Emergency Economic Stabilization Act of 2008. H.R. 1424, 110th Congress. https://www.govinfo.gov/content/pkg/BILLS-110hr1424enr/pdf/BILLS-110hr1424enr.pdf
[30] U.S. Department of the Treasury. (2009). Initial Report to the Congress: Office of the Special Inspector General for the Troubled Asset Relief Program (SIGTARP), 43.

- Capital Purchase Program (CPP): This program allowed the Treasury to buy senior preferred stock and, sometimes, common stock from healthy financial institutions of all sizes. This helped these institutions stay strong and stable.
- Systemically Significant Failing Institutions (SSFI) Program: Through this program, the Treasury could invest in very important financial institutions to prevent them from failing, which would have caused big problems in the market.
- Targeted Investment Program (TIP): This program let the Treasury make specific investments in financial institutions that were at risk of losing public confidence. This was to protect similar institutions and the wider financial market.
- Asset Guarantee Program (AGP): This program provided insurance-like protection for certain troubled assets held by financial institutions. The Treasury offered loss protection on these assets to help maintain market confidence.
- Automotive Industry Financing Program (AIFP): This program allowed the Treasury to invest in U.S. car companies and their financing divisions to prevent major disruptions in the automotive industry and financial markets.[31]

To oversee TARP's implementation the function of the Special Inspector General for TARP (SIGTARP) was established. SIGTARP conducted audits, investigations, and provided regular reports to Congress to ensure accountability and transparency. The Government Accountability Office (GAO) was tasked with auditing TARP activities and ensuring compliance with legal and regulatory standards. The Financial Stability Oversight Board (FSOB) provided high-level oversight and coordinated with other agencies involved in TARP. The Congressional Oversight Panel (COP) monitored the expenditure of TARP funds and assessed the effectiveness of TARP programs.[32]

When it comes to the U.S. economy focus is specifically on the (TARP) because it was a crucial initiative designed to save the very banks that played a significant role in causing the financial crisis. TARP was funded directly by the taxpayers' money, highlighting the direct impact on the public. These banks needed to be saved to halt the crisis and prevent even more severe economic consequences.

[31] U.S. Department of the Treasury. (2009). Initial Report to the Congress: Office of the Special Inspector General for the Troubled Asset Relief Program (SIGTARP), 29 – 45; U.S. Congress. (2008). Emergency Economic Stabilization Act of 2008. H.R. 1424, 110th Congress.

[32] U.S. Department of the Treasury. (2009). Initial Report to the Congress: Office of the Special Inspector General for the Troubled Asset Relief Program (SIGTARP); 29 – 45; U.S. Congress. (2008). Emergency Economic Stabilization Act of 2008. H.R. 1424, 110th Congress.

Without TARP, the financial system's instability could have led to a much deeper and more prolonged economic downturn.

3.3 The German economy and its history

After World War II, Germany's economy was devastated, with severe hardships and reliance on the black market. Significant economic reforms, particularly the currency reform of 1948 introducing the Deutsche Mark, sparked rapid economic growth known as the "Wirtschaftswunder" or economic miracle. From 1948 to the 1960s, West Germany experienced substantial increases in GNP and workers' wages, driven by the "Soziale Marktwirtschaft" or social market economy, which balanced free-market capitalism with social policies. However, from the 1970s, the economy faced structural challenges, and by the 1990s, Germany was dubbed the "sick man of Europe" due to high unemployment and slow growth. A turning point came with Chancellor Gerhard Schröder's "Agenda 2010" reforms in the early 2000s, which improved labor market flexibility and reduced welfare dependency, boosting employment and economic stability. These reforms, along with Germany's strong export performance, helped the country emerge from its economic malaise, becoming a leading exporter and benefiting from globalization and new markets.[33] For more information refer to Annex 3.

3.3.1 The German economy and the Financial Market Stabilization Act (FMStG)

The German government's response to the global financial crisis of 2008 involved a series of legislative measures aimed at stabilizing the financial market, ensuring the solvency of financial institutions, and maintaining trust in the banking system. The key legislative measures included the following:

- Financial Market Stabilization Act (FMStG): Enacted to stabilize the German financial market. Ensured the solvency of financial institutions. Aimed to restore and maintain trust in the German banking system by avoiding liquidity shortages and preventing a credit crunch that could affect the broader economy.
- Financial Market Stabilization Fund (SoFFin): Established under the FMStFG. Managed by the Financial Market Stabilization Agency (FMSA), based in Frankfurt am Main was tasked

[33] Spicka, M. (2018). *Selling the Economic Miracle.* Berghahn Books, 1- 4.; Funk, L. (2014). *Why has the German Job Market Done Astonishingly Well Despite the 2008–2009 'Great Recession'? New Economic Miracle, Institutional Transformation or Beggar-thy-Neighbour Policies?.* Perspectives on European Politics and Society, 15(3), 305-321.

with stabilizing the financial market by issuing guarantees, recapitalizing financial institutions, and taking over risk positions. It could issue guarantees up to 400 billion euros for the debt instruments and liabilities of financial-sector enterprises, initially set to operate until December 31, 2010.

- Financial Market Stabilization Acceleration Act (FMStBG): Designed to accelerate and simplify the acquisition of shares and risk positions of financial sector enterprises by SoFFin. It provided the legal framework for quick and effective government intervention in financial markets.[34]

3.4 GDP and Unemployment Rate

Analyzing GDP – Gross Domestic Product and unemployment rates is important for understanding the impact of an economic crisis and the effectiveness of government responses. GDP measures the total value of all goods and services produced in a country. It provides an indication of how the economy is performing. By examining GDP before and after the crisis, we can determine the extent to which the economy has shrunk or grown. A significant drop in GDP indicates a severe impact of the crisis. If GDP begins to recover after the implementation of government policies, it suggests that these policies are effective in boosting the economy.[35] However, using GDP levels has its limitations, especially when examining inequality. GDP levels do not consider population size, which means they can obscure how economic benefits are distributed among the population. This is where GDP per capita becomes more informative. GDP per capita divides the total GDP by the population, offering a clearer sense of the average economic output per person. It is a more accurate measure for assessing how the wealth generated by an economy is distributed among individuals. GDP per capita can reveal differences in living standards and show how policies might affect people differently within each country. For instance, a high GDP level in a large country like the U.S. might still align with significant income inequality if wealth is concentrated among a small segment of the population. On the other hand, a lower GDP level in a smaller country like Germany could still lead to a higher standard of living for its citizens if income is more evenly distributed. This distinction is crucial when analyzing economic

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[34] Lesch, H., Vogel, S., & Hellmich, P. (2017). *The state and social partners working together: Germany's response to the global financial and economic crisis.* International Labour Office, p. 4-7; Federal Financial Supervisory Authority. (2008, October 17). Act on the Establishment of a Financial-Market Stabilisation Fund. BaFin. https://www.bafin.de/SharedDocs/Veroeffentlichungen/EN/Aufsichtsrecht/Gesetz/FMStFG_en.html

[35] Coyle, D. (2015). *GDP: a brief but affectionate history-revised and expanded edition*. Princeton University Press, p. 24-40.

data in the context of inequality, as GDP per capita provides a more nuanced understanding of economic well-being and the effectiveness of policy measures.[36]

Unemployment rates, on the other hand, show the percentage of people who are looking for work but cannot find jobs. High unemployment rates indicate that many people are struggling to find employment. This has both social and economic consequences, as high unemployment leads to lower income for families and reduced spending in the economy, which can slow down recovery. If unemployment rates decrease after new policies are introduced, it suggests that these policies are helping people find jobs and improving the economy.[37]

Examining both GDP and unemployment rates together provides a more complete picture of the economy. GDP shows overall economic activity, while unemployment rates reveal how individuals are affected in their daily lives. Policymakers use these indicators to make decisions about how to address the crisis. For example, if GDP is improving but unemployment remains high, they might introduce job-specific programs to address this issue.

3.4.1 Okun's Law

The relationship between economic growth and unemployment is often called "Okun's Law." This is more of an observed pattern than a theoretical rule. Okun's Law suggests that a 2% to 3% decline in output growth usually leads to a one percentage point rise in the overall unemployment rate. Research shows that while this relationship is generally stable over the long term and across different economies, it can vary significantly over shorter periods. For instance, studies by Daly, Fernald, Jorda, and Nechio[38], and Owyang and Sepkhposyan[39] have found that Okun's law is not consistent over time. Some research points to changes in the Okun relationship due to economic crises. For example, studies by the IMF[40] suggest that financial crises and falling house prices can lead to higher unemployment for a given level of output. Other explanations propose that rising output might not reduce unemployment as expected due to a lack of workers with the right skills for available jobs. On the

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[36] Piketty, T. (2014). *Capital in the Twenty-First Century. Harvard,* University Press, p. 52-56.
[37] Junankar, P. R. (Ed.). (2016). *Economics of the Labour Market: Unemployment, Long-Term Unemployment and the Costs of Unemployment*. Springer, p. 3-5.
[38] Daly, M., Fernald, J., Jorda, O. and Nechio, F (2012), *Okun's Macroscope: output and employment after the great recession*, Federal Reserve Bank of San Francisco.
[39] Owyang, M., Sekhposyan, T. (2012), *Okun's law over the business cycle: was the great recession all that different?*, Federal Reserve Bank of St. Louis Review 94, no.5, pp. 399-418.
[40] IMF (2010), *Unemployment Dynamics in Recessions and Recoveries*, World Economic Outlook, Chapter 3, April 2010.

other hand, Ball, Leigh, and Loungani[41] argue that Okun's law remains a strong and stable relationship that was not affected by the economic crisis.[42]

[41] Ball, L.M., D. Leigh and P. Loungani. (2013) *Okun's Law: Fit at Fifty?,* National Bureau of Economic Research WP No. 18668.
[42] Anderton, R., Aranki, T., Bonthuis, B., & Jarvis, V. (2014). *Disaggregating Okun's Law: Decomposing the Impact of the Expenditure Components of GDP on Euro Area Unemployment* (ECB Working Paper No. 1747). European Central Bank

4. Analysis

The comparison of the TARP and FMStG is significant not only because both were designed to address what was one of the biggest economic crises the world history, but also because the assessment involves some of the largest economies in the world, the U.S. and Germany. Each country applied very different regulatory frameworks and approaches and it is important to examine how these policies were implemented to understand their effectiveness. By studying their implementation, we can learn how different regulatory environments influenced the outcomes. This insight is valuable for future policymaking, as it can help determine whether similar strategies could be effective in other economies facing crises. Additionally, understanding the impact of these policies on the long-term economic health of these countries is essential. Rapid implementation of policies can sometimes lead to unforeseen consequences, affecting not only the present but also future generations. This analysis can provide valuable lessons on how to balance the need for immediate action with the potential for long-term impacts.

4.1 Key Policy Measures Adopted in the U.S. and Germany

In the U.S., the Emergency Economic Stabilization Act of 2008 aimed to stabilize the financial system using the TARP fund by purchasing distressed assets, injecting capital into banks, and restoring financial stability, with $700 billion authorized by Congress. Similarly, Germany enacted the FMStG and FMStFG to stabilize its financial market, ensure the solvency of financial institutions, and prevent a credit crunch, providing guarantees of up to €400 billion for financial-sector enterprises.

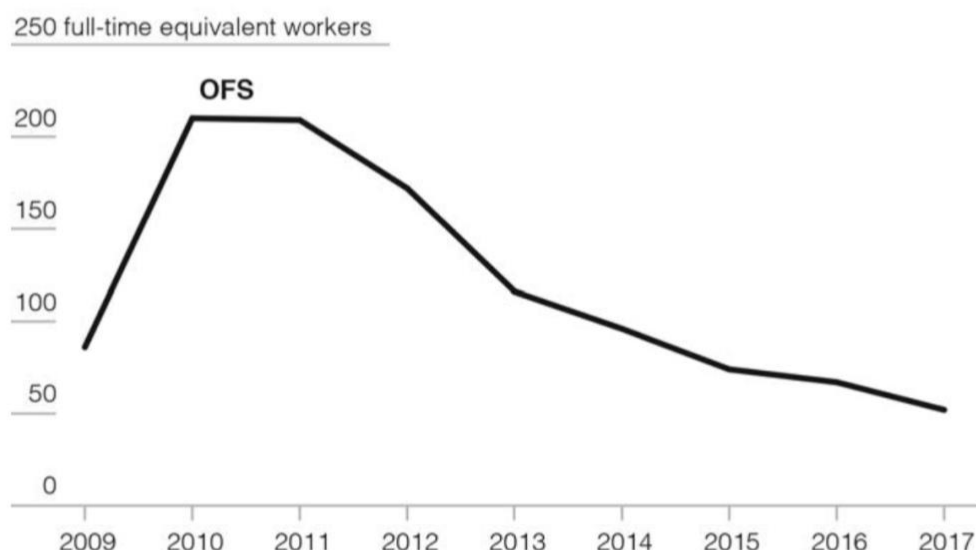
The German Financial-Market Stabilisation Fund (FMS) has no legal capacity and operates as a special trust, whereas the U.S. TARP is part of the Department of the Treasury with broader operational capacities, with oversight from SIGTARP which regularly reported to Congress. The German act created the FMSA as a public-law agency at the federal level, while the U.S. act utilised the existing structure of the Treasury Department without creating a new agency. Additionally, the German act includes provisions for the involvement and financial participation of the Länder (states) in certain financial burdens, whereas the U.S. act is primarily a federal initiative without direct state government involvement.[43] This is due to the fact that the heads of regional governments in Germany play a

[43] U.S. Congress. (2008). Emergency Economic Stabilization Act of 2008. H.R. 1424, 110th Congress; U.S. Department of the Treasury. (2009). Initial Report to the Congress: Office of the Special Inspector General for the Troubled Asset Relief Program (SIGTARP); Federal Ministry of Economics and Technology (BMWi). (2009). 2009 Annual Economic Report: A Growth Policy to Fit Cyclical Conditions. Public Relations Division, p. 10-11, 20-21; Massad, T. G., & Kashkari, N. T. (2020). *Implementing TARP: The*

significant role in the political system. They are not only leaders in their own regions but also participate in legislative procedures in Berlin. Unlike the United States, where the upper house of the two-chamber parliament consists of directly elected senators, Germany's upper house is made up of representatives from the regional governments.[44]

Consequently, the exact number of people involved in executing and monitoring the acts varies. For TARP, the Office of Financial Stability employed approximately 250 people at its peak (see Figure 1 below), with detailed data on the number of people involved and funds allocated. In contrast, specific data on the number of employees and the exact amount of money allocated for the administration of the FMS are not available, other than the information that all funding was provided by the government.[45]

Figure 1 – Number of full-time employees for TARP implementation



Source: B. Bernanke, T. F. Geithner, H. M. Paulson, & J. N. Liang (Eds.), First responders: Inside the U.S. strategy for fighting the 2007-2009 global financial crisis. Yale University Press, p. 394.

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administrative architecture of the Troubled Assets Relief Program. In B. S. Bernanke, T. F. Geithner, & H. M. Paulson, Jr. (Eds.), *First responders: Inside the U. S. strategy for fighting the 2007-2009 global financial crisis* (pp. 385-409). Yale University Press.

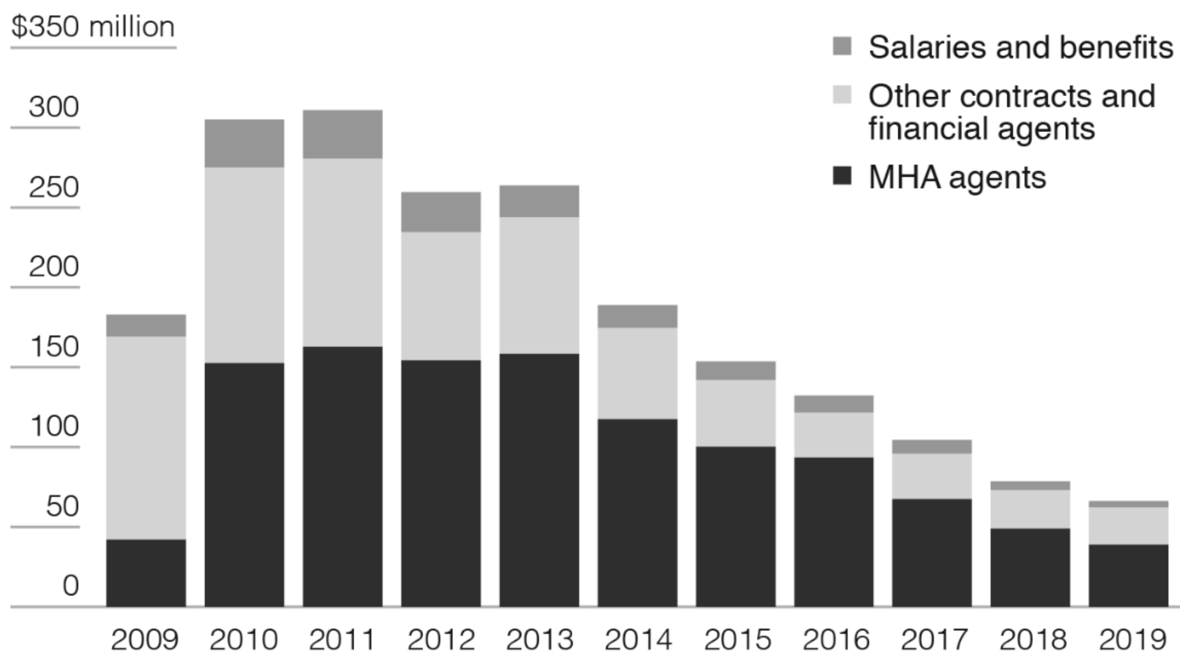
[44] Hellwig, M. (2018). *Germany and the financial crises 2007 – 2017* (Preliminary draft). Max Planck Institute for Research on Collective Goods, p. 40.

[45] Finanzmarktstabilisierungsfondsgesetz (FMStFG) [Law], Oct 17, 2008, Bundesgesetzblatt Teil I. https://www.gesetze-im-internet.de/fmstfg/ ; Massad, T. G., & Kashkari, N. T. (2020). Implementing TARP: The administrative architecture of the Troubled Assets Relief Program. In B. S. Bernanke, T. F. Geithner, & H. M. Paulson, Jr. (Eds.), *First responders: Inside the U. S. strategy for fighting the 2007-2009 global financial crisis* (pp. 385-409). Yale University Press; Die Kosten, die der Finanzagentur und der Anstalt in Ausübung der Aufgaben nach diesem Gesetz entstehen, werden durch den Bund getragen. Zu den Kosten der Finanzagentur und der Anstalt nach Satz 1 gehören die Personal- und Sachkosten sowie die Kosten Dritter, derer sich die Finanzagentur oder die Anstalt bei der Erfüllung ihrer Aufgaben nach diesem Gesetz bedient. (Transaltion: The costs incurred by the Financial Agency and the Institution in the performance of their tasks under this law shall be borne by the federal government. The costs of the Financial Agency and the Institution under sentence 1 include personnel and material costs as well as the costs of third parties employed by the Financial Agency or the Institution in fulfilling their tasks under this law.).

Moreover, the German Act specifies that certain activities and meetings are classified and kept secret, emphasizing internal controls. In contrast, the U.S. act emphasizes transparency with extensive public reporting requirements and mandatory disclosures. This distinction is true to a certain extent because many documents related to the control of TARP are publicly available. On the other hand, the German documents we investigated did not specify details such as the number of people involved or the specifics control except that it is controlled by the office of the ministry.

The graph below presents the budget allocations for employees tasked with implementing the Troubled Asset Relief Program (TARP) from 2009 to 2019. It categorizes the expenditures into three groups: salaries and benefits, other contracts and financial agents, and MHA agents. The trend shows a gradual reduction in the budget each year, reflecting the time-bound nature of the TARP implementation, which was designed to be completed within a specific timeframe.

Figure 2 – Allocated budget for implementation of the TARP



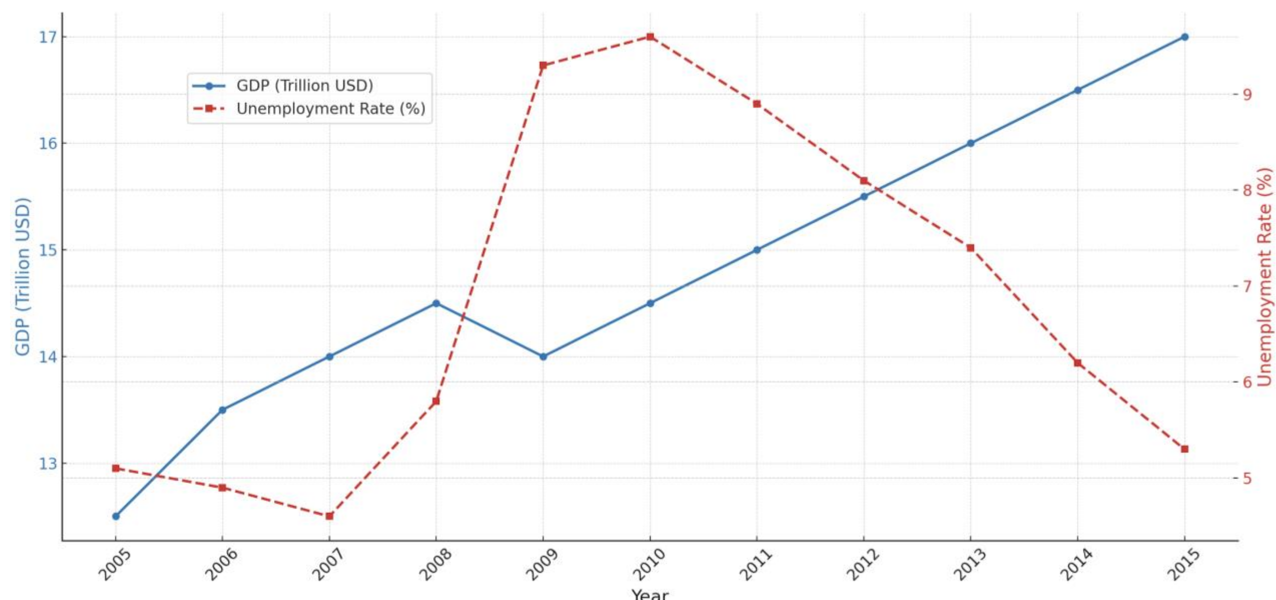
Notes: MHA refers to the "Making Home Affordable" program.

Source: B. Bernanke, T. F. Geithner, H. M. Paulson, & J. N. Liang (Eds.), First responders: Inside the U.S. strategy for fighting the 2007-2009 global financial crisis. Yale University Press, p. 395.

4.2 Differences in results of applied policies and their impact on GDP and unemployment rate

In 2007, the GDP of the United States was $14.5 trillion, with an unemployment rate of 4.6% (see Figure 3 below). By 2008, the GDP slightly increased to $14.8 trillion, but the unemployment rate started increasing and reached 7.3% as the effects of the financial crisis began to be felt. The year 2009 saw a more pronounced impact, with GDP dropping to $14.4 trillion and unemployment rising sharply to 9.5%. By 2010, while GDP recovered to $15 trillion, the unemployment rate remained high at 9.9%, indicating a slow recovery process. In 2011, GDP levels continued to rise and it was $15.6 trillion, and the unemployment rate started to drop to 9%.

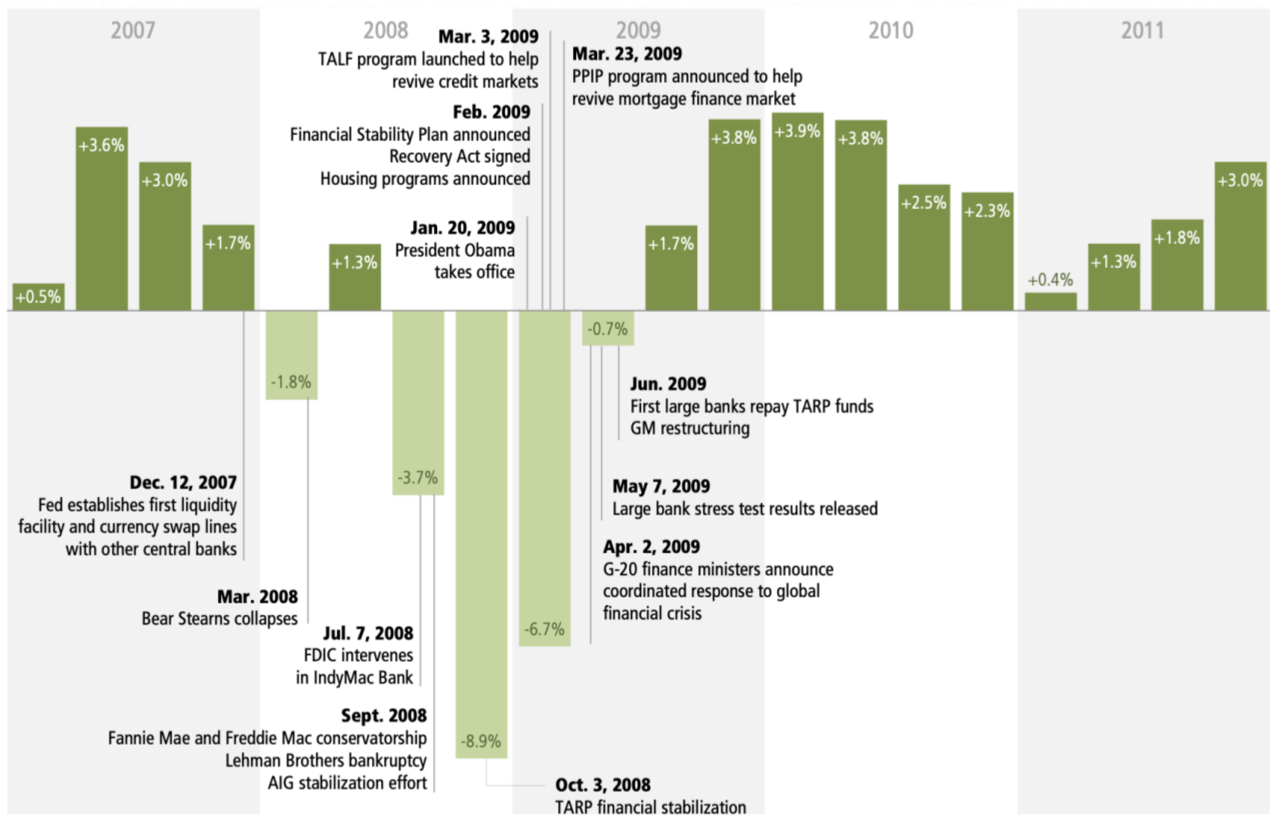
Figure 3 – US GDP and Unemployment Rate (2005-2015)



Source: Trading Economics. (n.d.). United States unemployment rate. Retrieved June 16, 2024, from https://tradingeconomics.com/united-states/unemployment-rate; Trading Economics. (n.d.). United States GDP. Retrieved June 16, 2024, from https://tradingeconomics.com/united-states/gdp

Consequently, the graph (Figure 4 below) illustrates the impact of the TARP on GDP levels during the financial crisis. After TARP's implementation in October 2008, there was an immediate increase in GDP, indicating that the intervention helped stabilize the economy and promote recovery. Within a year and a half, GDP levels nearly returned to their pre-crisis state. This underscores the importance of government intervention using appropriate measures to address economic crises effectively.

Figure 4 - Timeline of the TARP's implementation and Real GDP growth, quaterly



Source: U.S. Department of the Treasury. (2012). The Financial Crisis Response in Charts.

During the global financial crisis, Germany's GDP and unemployment rates experienced significant changes. In 2007, Germany's GDP was $3.43 trillion, and the unemployment rate was approximately 8.4% (see Figure 5 below). By 2008, the GDP slightly increased to $3.75 trillion, while the unemployment rate dropped to 7.6% by the middle of the year but we saw a slight increase to 8% at the end of the year when the economic crisis hit the market. In 2009, the GDP declined to $3.39 trillion, while the unemployment rate stagnated for half of the year at 8% and then we saw a decline towards the end of the year. By 2010, the GDP began to recover, reaching $3.42 trillion, with the unemployment rate decreasing to 7.4%. This recovery continued into 2011, with the GDP rising to $3.75 trillion and the unemployment rate falling to 6.8%.

Figure 5 – Germany GDP and Unemployment Rate (2005-2015)

Source: Trading Economics. (n.d.). Germany unemployment rate. Retrieved June 16, 2024, from https://tradingeconomics.com/germany/unemployment-rate; Trading Economics. (n.d.). Germany GDP. Retrieved June 16, 2024, from https://tradingeconomics.com/germany/gdp

Subsequently, we applied Okun's Law, which we know posits an inverse relationship between GDP growth and unemployment rates and for every 1% increase in the unemployment rate, a country's GDP is expected to be roughly an additional 2% lower than its potential GDP. In the context of the U.S., the implementation of the TARP and the Emergency Economic Stabilization Act (EESA), the recovery in GDP did not immediately translate into significant improvements in the unemployment rate (as shown in Figure 3 above). This can be partly explained by Okun's Law, as there were substantial GDP losses during the crisis, from $14.8 trillion to $14.4 trillion in 2008 and 2009, respectively, it would be expected to result in higher unemployment rates. Furthermore, the structural issues in the labour market and slow job creation further exacerbated this lag in unemployment recovery.

During a recession, after an initial rise in unemployment, several scenarios can occur. In some cases, firms do not increase vacancies, and unemployment remains high, which does not necessarily indicate structural issues. In other cases, unemployment continues to rise even with steady demand, indicating

structural problems in the labour market. Alternatively, more job openings can lead to a return to initial unemployment levels, suggesting a well-recovering economy. However, there can also be situations where job vacancies increase but unemployment falls more slowly, indicating both recovery and structural issues.

In the case of the U.S., the response to the recession included expansionary monetary and fiscal policies. However, unemployment did not fall as expected, indicating new microeconomic rigidities in the labour market. This mismatch suggests that the efficiency of matching workers with jobs had temporarily deteriorated due to various factors, such as firms being less willing to hire driven by the insecurity brought about by the financial crisis, workers being less willing to accept jobs most probably not being compensated enough.[46]

On the contrary, in Germany, the pre-crisis labour market reforms, which included measures to increase labour market flexibility and reduce long-term unemployment, helped mitigate the impact on unemployment rates. Despite significant drops in GDP (from $3.71 trillion in 2007 to $3.37 trillion in 2009), the unemployment rate steadily decreased from 8.4% to 6.0% in 2007 and 2011, respectively. Generally, the German labour market remained stable during the crisis. There was a small increase in unemployment (at the end of 2008 and the beginning of 2009), but this had already been reversed by the end of 2010 (see Figure 5). Germany's GDP levels fluctuated due to the later Eurozone crisis and Greek bankruptcy issues. Unlike the USA, Germany's labour market flexibility and labour policies played a key role in stabilizing the economy without increasing unemployment. This "jobs miracle" was achieved through labour market reforms, flexible employment types, and changes to social welfare and pension systems. Researchers found that, instead of using "hire and fire" policies and laying off many workers to reduce costs, many firms lowered working hours and labour productivity. They did this by reducing surplus hours, banning overtime, and introducing short-time working schemes.[40] This outcome aligns with Okun's Law, where effective labour market policies can dampen the negative effects of GDP contractions on unemployment. Overall, the data shows that government policies definitely helped stabilize the economy after the initial downturn. In the U.S., the situation looked more alarming, which is why action needed to be taken quickly. In Germany, bailing out the banks helped stabilize the economy and restore confidence. However, an even bigger part of the stabilization came from policies introduced before the crisis, specifically those regulating the labour market. Okun's Law helps explain why the drop in GDP was closely followed by rising unemployment rates,

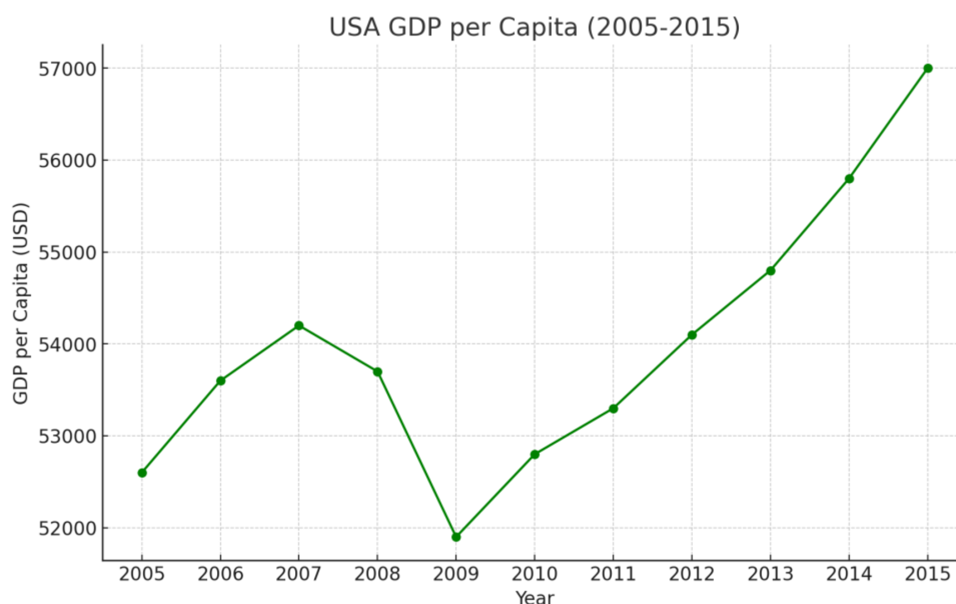
[46] Pissarides, C. A. (2013). *Unemployment in the great recession. Economica*, *80*(319), 385-403.

particularly in economies that did not have strong labour market policies in place. The comparison between the U.S. and Germany illustrates how structural reforms and proactive policies can mitigate the adverse effects predicted by Okun's Law.

As explained above, considering GDP per capita serves as a more precise indicator for evaluating how the wealth produced by an economy is shared among its people. GDP per capita can highlight variations in living standards among different individuals or groups within a country.

In the graphs below, the period from 2005 to 2007 saw a steady increase in GDP per capita for both the United States and Germany, reflecting economic growth. However, the financial crisis in 2008 led to a significant decline in GDP per capita in both countries, indicating a reduction in overall economic output and average income per person. In the U.S. (see Figure 6) GDP per capita dropped by about 6.5% from 2008 to 2009, while in Germany (see Figure 7), the decline was around 8% during the same period. This sharp decline highlights the severity of the crisis and its impact on the economy. As the economies began to recover after 2009, GDP per capita in both countries started to rise again. In the U.S., it gradually returned to pre-crisis levels by around 2013 and continued to grow through 2015. Similarly, in Germany, GDP per capita recovered more quickly, surpassing pre-crisis levels by 2011 and continuing to increase steadily thereafter.

Figure 6 – US GDP per Capita (2005-2015)



Source: Trading Economics. (n.d.). United States GDP per Capita. Retrieved July 16, 2024, from https://tradingeconomics.com/united-states/gdp-per-capita

Figure 7 – Germany GDP per Capita (2005-2015)

Source: Trading Economics. (n.d.). Germany GDP per Capita. Retrieved July 16, 2024, from https://tradingeconomics.com/germany/gdp-per-capita

These trends demonstrate that while the economies of both countries were severely impacted by the crisis, they managed to stabilize and rebound over time. However, it is important to note that the recovery in GDP per capita does not necessarily mean that the economic benefits were evenly distributed among the population. A decline in GDP per capita often leads to rising inequality, as lower-income individuals are typically more affected by economic contractions than wealthier individuals, resulting in greater disparities between the rich and the poor.

4.3 Effects on economic inequality in the U.S. and Germany – Policies examined through the Theory of Social Equity

As we mentioned above the theory of social equity, developed and shaped by H. George Frederickson, is particularly important within the context of public administration. To address the economic downturn following the crisis, a primary strategy was the implementation of bank bailout policies. However, this approach led to a significant increase in national debt. Consequently, there were considerable concerns about social equity and the long-term implications for public service funding.

Large-scale federal borrowing to fund bailouts for investment banks, insurance companies, bad mortgages, and the domestic automobile industry, as well as to pay for major public infrastructure projects to boost employment, raised significant intergenerational concerns. There are widespread social equity issues involved. It can be argued if it is justifiable to use debt to finance high executive salaries, knowing that future generations will bear the cost or to increase the federal deficit to improve corporate credit availability, especially when it's widely recognised that the corporate sector already has excessive debt. The immediate demands of a recession often overshadow the longer-term principles of intergenerational social equity. There is evidence that public officials need to plan future resources for future generations. It is important to consider how can current policies ensure sustainable growth and resources for those yet to come as well as how we balance immediate economic needs with the long-term health of our environment and society. Healthcare, education, and welfare programs are the pillars of social equity, facilitating equal opportunities and access to essential services for all societal segments. The aftermath of bank bailouts, characterized by an increase in national debt, threatens the sustainability of these critical programs. [47]

4.3.1 The implications of educational budget cuts

In the section below, we examine how government spending on education budgets in both the U.S. and Germany changed after the economic crisis, and explore why these changes could have consequences for future generations and lead to intergenerational differences in opportunities.

Cutting education budgets can significantly hinder the expansion of education and the supply of skilled workers. Reduced funding often leads to fewer resources for schools, larger class sizes, and diminished access to higher education, all of which can slow the growth of an educated workforce. Consequently, as technological advancements continue to increase the demand for skilled labor, the insufficient supply of skilled workers exacerbates labor income inequality.[48]

Figure 8 below illustrates the percentage of GDP allocated to education spending in the U.S. from 2005 to 2015. Initially, education spending hovered around 16.8% of GDP in 2006, but it began to decline significantly from 2007, reaching the lowest point of around 15.5% in 2011. Thereafter, there was a gradual increase, stabilizing around 16% by 2015. The lower section of the graph shows the

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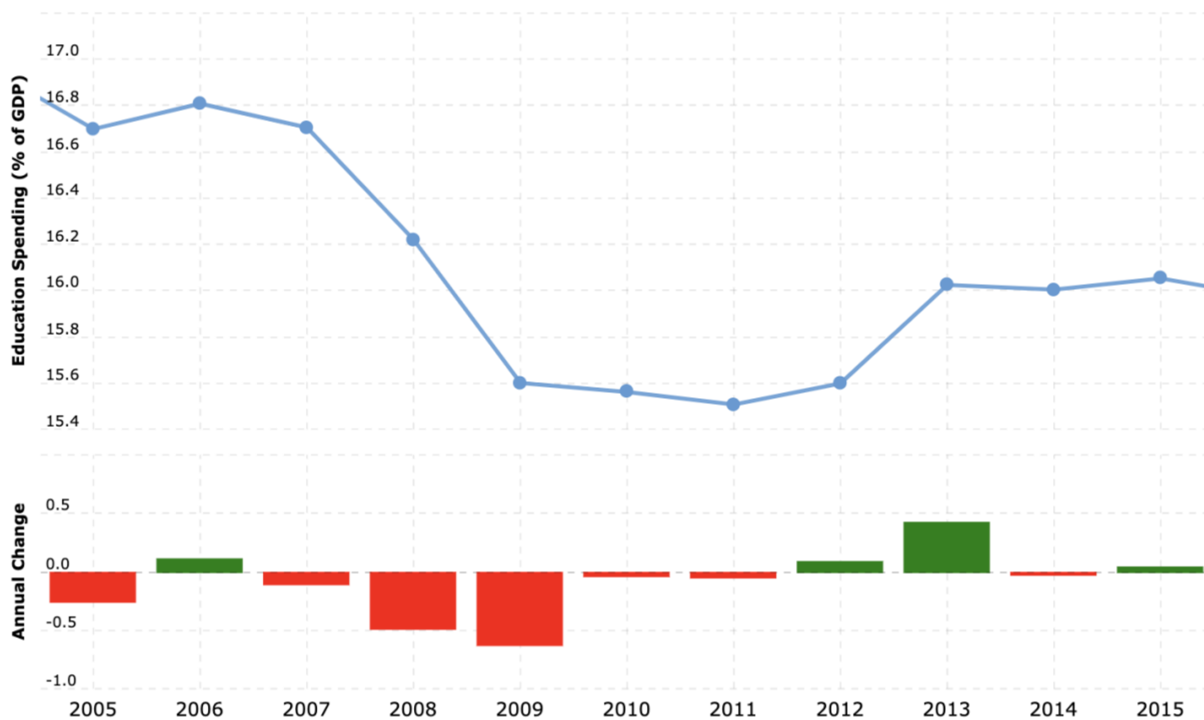
[47] Frederickson, H. G. (2015). *Social equity and public administration: Origins, developments, and applications: Origins, developments, and applications*. Routledge, p. 85.

[48] Piketty, T., & Saez, E. (2014). Inequality in the long run. Science, 344(6186), 838-843.

annual change in education spending. The notable periods of decline occurred between 2007 and 2011, aligning with the global crisis, followed by modest increases in 2013 and 2015.

Figure 8 - U.S. Education Spending



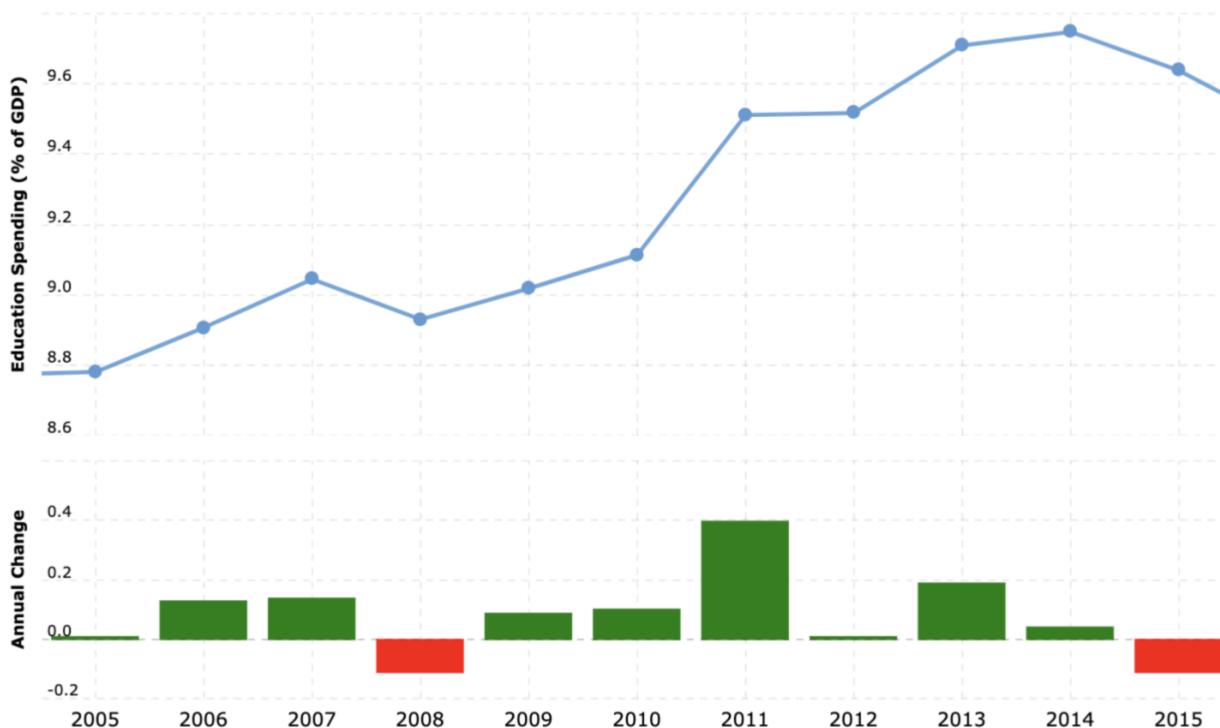
Source: Macrotrends. (n.d.). Education spending - United States. Retrieved June 16, 2024, from https://www.macrotrends.net/global-metrics/countries/USA/united-states/education-spending

In 2009, over 41 states in the U.S. reported significant reductions in various public services. These included cuts in K-12 education, in 25 states, and higher education, in 34 states. Many states anticipated further cuts during the fiscal year as they projected their revenues. Budget cuts for public colleges and universities led to reductions in faculty and staff, pay cuts ranging between 2-10% and significant increases in tuition and cuts in financial aid. More specifically, in Florida, tuition at all 11 public universities increased by 15% for the 2009-2010 school year. The University of Florida announced it would eliminate 150 faculty positions, resulting in over 50 staff and faculty layoffs while Florida State University planned to lay off up to 200 faculty and staff members. Similarly, in Washington state, the University of Washington faced a 26% reduction in its state budget for the coming biennium, while Washington State University was increasing tuition by almost 30% over two years. In Illinois, deep cuts were made to state financial aid programs, expecting to cancel a need-based financial aid program for the spring 2010 semester that served 145,000 low- and moderate-income students.

Even before the global crisis, California's tripartite system, which includes the University of California (UC), the California State University (CSU), and nearly 110 Community Colleges, had been slowly losing public funding. The University of California system faced a cut of $813 million in its state-funded operating budget, which is approximately 20% of UC's 2007-2008 budget. This led to the elimination of 2,400 freshmen positions, salary cuts for academic and administrative staff of 4 to 10%, a hiring freeze, restricted travel and equipment purchases, laying off 1,900 employees, eliminating 3,800 faculty positions, and deferring the hiring of 1,600 academic positions. Student fees increased by approximately 32% since 2008. [49]

Consequently, Figure 9 below depicts education spending as a percentage of GDP in Germany from 2005 to 2015. Starting at around 8.8% in 2005, education spending showed a steady increase, peaking at around 9.6% between 2011 and 2013. Despite the decline in 2008, significant increases followed in 2010 and 2011.

Figure 9 – Germany's Education Spending



Source: Macrotrends. (n.d.). Education spending - Germany. Retrieved June 16, 2024, from https://www.macrotrends.net/global-metrics/countries/DEU/germany/education-spending

[49] Douglass, J. A. (2010). *Higher education budgets and the global recession: Tracking varied national responses and their consequences*. University of California, Berkeley. p. 8-10.

The largest source of funding for higher education in Germany is basic state funding, making it clear that the German higher education system relies heavily on government support. Unlike the U.S., where higher education receives a larger proportion of GDP funding, Germany's system is nearly exclusively state-financed, with both direct and indirect state funding playing significant roles. This has led to the German higher education system being relatively underfunded, especially in comparison to the U.S.

In Germany, spending on higher education can increase in absolute terms, but the percentage of GDP contributing to educational funding remains stable if the GDP is growing, which has been the case in recent years. A key difference between the two countries is the proportion of private investment in their higher education systems. In the U.S., the significantly higher private spending is mainly due to the considerable rise in tuition fees. This means that in Germany, state funding has to cover a much larger proportion of higher education expenditures compared to the U.S.

The American system's differentiation triggers various effects during a crisis, while also intensifying the system's internal differentiation. Despite earlier forecasts, Germany's funding system, which relies solely on state funding, has not proven disadvantageous during the financial crisis. In fact, it could even be seen as beneficial, despite the slight budget reduction in 2008.[50]

Temporal generations experience significant benefits from investments in education because they receive improved facilities and resources immediately. They also bear moderate costs, likely through taxes or other means of funding these investments. The near-term future generations also benefit from the improved education infrastructure, though the benefits are not as immediate or strong. They continue to pay moderate costs, similar to the current generation, to maintain and possibly improve the education system. Future generations, further down the line, still benefit from the educational investments made earlier, but to a moderate extent. Their main costs are likely limited to maintaining the existing infrastructure, which is generally lower than the initial investment costs.[51]

Investing in education through capital bonding means allocating funds to build and improve school infrastructure. This model aligns with the concept of intergenerational social equity, ensuring that each generation contributes to and benefits from these investments. This approach supports the idea of

[50] Hüther, O., & Krücken, G. (2018). *Higher education in Germany--recent developments in an international perspective.* Palgrave Macmillan, p. 80-84.
[51] Frederickson, H. G. (2015). *Social equity and public administration: Origins, developments, and applications: Origins, developments, and applications*. Routledge, p. 94-95.

creating "just institutions"[52] for future generations, ensuring that educational improvements made today continue to provide value in the years to come while spreading the costs across multiple generations to avoid overburdening any single one.

[52] The Rawlsian concept of leaving "just institutions" comes from the philosophical work of John Rawls, particularly his theory of justice as fairness, which he outlines in his seminal book, "A Theory of Justice." According to Rawls, a society's institutions should be designed in such a way that they distribute benefits and burdens among all members of society in a fair and equitable manner; Rawls, J. (2005). A theory of justice (Original ed). Belknap Press, p. 284-292.

5. Discussion

Since the United States and Germany play significant roles in the global economy, their actions during the crisis had widespread effects. By studying their approaches, we gain a better understanding of how such policies influence global economic stability and intergenerational equity. When comparing the Troubled Asset Relief Program (TARP) in the U.S. and the Financial Market Stabilization Act (FMStG) in Germany, it is essential to follow a structured approach. This ensures a thorough and objective analysis, allowing others to replicate the research and reach similar conclusions. In this thesis, we critically examined these two acts to identify their similarities and differences, focusing on their implementation and outcomes. We addressed the main research question: *How could the policies put in place in the U.S. – Emergency Economic Stabilization Act of 2008 and Germany – Finanzmarktstabiliserungsgesetz (FMStG) after the 2008 financial crisis have influenced economic inequality?* Keeping in mind the distinct economic structures and policy approaches of each country, we analyzed the implementation and outcomes of these policies to understand their impact on economic inequality and intergenerational equity.

To answer the first research subquestion regarding the key policy measures adopted in each country, we identified that in the United States, the key policy measure was the Troubled Asset Relief Program (TARP), designed to inject liquidity into the financial system primarily by purchasing troubled assets from large financial institutions. In contrast, Germany's key policy measure was the Financial Market Stabilization Act (FMStG) and the establishment of the Financial Market Stabilization Fund (SoFFin), which included support for financial institutions, businesses, and employment protection measures.

Addressing the second research subquestion, which sought to understand how these policies differed in their approach and implementation between the U.S. and Germany, it was found that the U.S. approach through TARP focused primarily on injecting liquidity into the financial system to stabilize large financial institutions and quickly restore market confidence. TARP succeeded in stabilizing the financial markets and preventing further economic collapse but faced criticism for disproportionately benefiting wealthy institutions and executives at the expense of taxpayers. The direct impact on economic inequality was pronounced, with substantial funds directed towards financial sector bailouts rather than broader economic relief. Therefore, while GDP levels showed signs of recovery relatively quickly, unemployment rates remained high for an extended period, highlighting a disconnect between financial market stability and real economic recovery for average Americans.

In contrast, Germany's approach through the FMStG and the establishment of the SoFFin was more holistic. Germany's measures included not only support for financial institutions but also direct interventions to support businesses and protect employment. The German model emphasized maintaining labor market stability which helped to keep unemployment rates relatively low even during the crisis. This approach demonstrated the effectiveness of integrating social policies with economic stabilization measures, leading to a more equitable recovery process.

The third research subquestion, which explored how the immediate policy responses focusing on short-term stabilization affected economic inequality in the U.S. and Germany, revealed significant differences in the outcomes due to the distinct economic structures and policy approaches of each country.

Despite these differences, both countries faced challenges in achieving social equity. In the U.S., the focus on financial sector stabilization without equivalent support for broader economic sectors contributed to growing economic disparities. The high costs associated with TARP added to the national debt, raising concerns about the burden on future generations. Germany, while more successful in protecting employment and integrating social policies, also had to navigate the limitations of state funding and the pressures of maintaining fiscal discipline.

According to the findings, the policies increased inequality but also helped mitigate it by stabilizing the economy and returning GDP levels to their previous states. While a significant amount of money needed to be invested, it was an inevitable step and the better option of two unfavorable choices (intervene or not). The study supports the hypothesis that future generations will be more affected by this crisis than those who experienced it firsthand, especially considering the cuts in the education budget. The debt incurred and the economic slowdown worldwide will negatively affect the future population.

The findings of this research underscore the importance of balanced economic policies that consider both immediate financial stability and long-term social equity. Policymakers should aim to design interventions that not only address the urgent needs of financial crises but also promote inclusive growth and fairness. Ensuring that the benefits of economic recovery are more evenly distributed across society is crucial for building resilient economies.

6. Conclusions

This thesis has explored the comparative responses of the U.S. and Germany to the 2008 financial crisis, focusing on how these policies impacted economic inequality and intergenerational equity. The analysis revealed significant differences in the outcomes due to the distinct economic structures and policy approaches of each country.

The Troubled Asset Relief Program (TARP) in the United States aimed at stabilizing the financial markets by purchasing troubled assets from large financial institutions, successfully preventing further economic collapse but faced criticism for favoring wealthy institutions over taxpayers. This approach led to pronounced economic inequality and a recovery that saw GDP improve while unemployment rates remained high, indicating a disconnect between market stability and real economic recovery. Conversely, Germany's Financial Market Stabilization Act (FMStG) and Financial Market Stabilization Fund (SoFFin) took a more comprehensive approach, including direct support for businesses and employment protection measures, such as short-time work schemes, which maintained lower unemployment rates and promoted a more equitable recovery. Both countries, however, faced challenges in achieving social equity, with the U.S. experiencing growing economic disparities and increased national debt, and Germany dealing with funding limitations and fiscal discipline pressures.

The study supports the notion that while such policies increased inequality, they were necessary for economic stabilization. It also highlights the impact on future generations due to incurred debt and economic slowdowns, emphasizing the need for balanced policies that ensure both immediate stability and long-term social equity to build resilient economies.

However, this study has limitations that should be considered. While examining GDP levels provides insight into overall economic health, it does not account for income inequality or the distribution of wealth. On another side, GDP per capita may recover, it doesn't guarantee that economic benefits are evenly distributed, as declines in GDP per capita often exacerbate inequality by disproportionately affecting lower-income individuals, thereby widening the gap between the rich and the poor. Similarly, unemployment rates help us understand how the crisis affected the labor market and people's livelihoods but do not consider underemployment or job quality. Additionally, these metrics can lag, meaning they might not reflect real-time economic conditions. These broad measures may not capture all aspects of the economy's condition, limiting the depth of our analysis.

Despite these limitations, this research highlights the importance of balanced economic policies that consider both immediate financial stability and long-term social equity. Policymakers should aim to design interventions that not only address the urgent needs of financial crises but also promote inclusive growth and fairness. Ensuring that the benefits of economic recovery are more evenly distributed across society is crucial for building resilient economies.

This comparative study of the U.S. and Germany provides valuable insights into the role of government intervention during economic crises. It underscores the need for integrating social equity considerations into economic policy to achieve sustainable and inclusive outcomes. Future research should continue to explore the long-term effects of these crisis interventions on different socio-economic groups and generations. Understanding the interplay between economic policies, social equity, and intergenerational fairness is vital for developing robust frameworks to handle future crises.

Moreover, it is important to acknowledge that education is not the only area affected by the financial crisis. Other crucial elements, such as healthcare, public debt, and social welfare, also play significant roles in shaping the future of the population. These areas deserve attention in future research to provide a more comprehensive understanding of how financial crises impact different aspects of life for future generations. Future studies should explore the effects of the financial crisis on healthcare budgets, public debt, and other social services to better understand the broader consequences and to develop strategies that address these challenges effectively.

In conclusion, while immediate stabilization of financial markets is essential, neglecting the broader socio-economic impacts can lead to prolonged recovery periods and increased inequality. The experiences of the U.S. and Germany illustrate that integrating social equity considerations into economic policy can lead to more sustainable and inclusive outcomes.

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Annex 1 – Mortgage securitization

Prior the crisis, the global economy had easy access to credit, causing a significant rise in the prices of assets like houses and shares. This created a bubble which eventually burst. Mortgage securitization played a key role in this crisis, so it's important to understand how it works. A mortgage gives a bank a promise of future cash flow over many years as the borrower repays the loan on their home. However, banks may want faster returns and create securities, specifically residential mortgage-backed securities (RMBS). In simple terms, a security is a contract that can be bought and sold, giving the holder a stake in a financial asset. When a bank turns a mortgage into a security and sells it, the buyer gets the right to the mortgage repayments. This buyer is often a special purpose vehicle (SPV) that sells notes of different quality to long-term investors like pension funds. The bank earns quick fee revenue from the deal and may or may not have future obligations to the SPV, depending on the contract. Problems arise if the mortgage holder stops making payments, as the promised cash flow won't come through for the security holder. The house can be repossessed and sold, but if property prices have fallen, the sale may not cover the mortgage. As home lending increased over the past decade, the risk of mortgage default grew. Many securities became "toxic" for banks with commitments to them. Banks became cautious about lending to each other, unsure of the losses these securities might cause and whether it was safe to use other institutions as counterparties in interbank and swap markets, leading to the credit crunch.[53]

[53] Insights, O. E. C. D. (2010). From crisis to recovery. The causes, course and consequences of the Great Recession, 21-22.

Annex 2 – Historical background of the U.S. economy and how we came to a crisis

After World War I, the American economy experienced rapid growth during the 1920s, known as the "Roaring Twenties," characterized by industrial expansion and consumerism. However, the Great Depression of the 1930s led to severe economic downturns and high unemployment. Consequently, the post-World War II era saw significant economic growth, driven by industrialization, technological advancements, and increased consumer spending. During the 1980s and 1990s, deregulation and globalization fostered the expansion of the free market, where businesses operated with minimal government intervention, contributing to substantial economic growth and the rise of multinational corporations. This free market approach allowed the U.S. economy to grow into one of the largest and most dynamic in the world.

Since the 1930s, the housing market has been one of the main drivers of the American economy. America's housing finance relied on commercial banks and local savings banks, known as savings and loans, providing long-term fixed-interest loans. By the late 1960s, 30-year fixed-interest loans with down payments as low as 5 per cent became common. These loans were funded by depository institutions offering government-insured savings accounts with capped interest rates. This system helped expand homeownership to nearly 66 per cent of households by the 1970s.[54]

By the early 1980s, most of the nearly 4,000 savings and loan banks were insolvent. Cleaning up these banks was costly, and the Reagan era's free market ideology led to deregulation and lowered capital standards, hoping these banks could recover. Commercial banks managed to survive, but more than a thousand savings and loan banks failed. Most of the rest were bailed out, bought, or merged. The resolution cost taxpayers around $124 billion in the 1990s dollars.[55]

After the savings-and-loans crisis in the 1980s, America's mortgage system relied on government-sponsored enterprises (GSEs) – the Federal National Mortgage Association (FNMA), also known as Fannie Mae and the Federal Home Loan Mortgage Corporation (Freddie Mac). The Fannie Mae was established in 1938 to support the housing market by buying and selling government-insured

[54] Jaffee, D., & Quigley, J. M. (2013). *The future of the government-sponsored enterprises: The role for government in the US mortgage market.* In E. L. Glaeser & T. M. Sinai (Eds.), *Housing and the financial crisis* (pp. 361-417). University of Chicago Press.
[55] Tooze, A. (2018). *Crashed: How a decade of financial crises changed the world*. Penguin, 43.

mortgages. Initially, Fannie Mae operated on a small scale but expanded its operations significantly over time. Consequently, in 1970, Freddie Mac was created to provide similar support for the mortgage market, specifically for conventional mortgages not guaranteed by the government. Both Fannie Mae and Freddie Mac became influential players in the mortgage market, benefiting from an "implicit government guarantee" which suggested that the government would cover their debts if they failed.[56]

In the 1990s, Congress prioritized promoting home ownership for lower-income and minority communities. The Federal Housing Enterprises Financial Safety and Soundness Act of 1992 set lending goals for GSEs, and in 1995, the government issued targets for underserved areas and low-income housing. Many new homeowners in the 1990s and 2000s were minority families previously denied mortgages due to "redlining" policies. This real estate boom helped grow the African American and Latino middle class, which was important to the Democratic Party. The GSEs, influential in Washington, D.C., were often blamed by free market advocates for the unfolding crisis in 2006. However, this could be argued by the fact that these risky loans came from private lenders seeking profit, and that the GSEs did not cause the crisis but rather contributed two key innovations: the originate-to-distribute mortgage lending system and securitization, which were essential to the crisis's development. [57]

The implicit government guarantee encouraged Fannie Mae and Freddie Mac to engage in high-yield, risky investments, as they believed the government would cover any serious losses. The credit crisis began escalating when the subprime mortgage meltdown, which gained prominence in 2007, spread from the mortgage industry to national and global markets, affecting the entire economy. Initially, the focus was on the subprime industry and the immediate fallout from the meltdown, but the credit crisis continued to grow steadily. As the financial crisis worsened in the second half of 2007 and through September 2008, regulators examined the tools they had to deal with the situation. Until October 2008, the only tool available for nonbank financial firms was the Federal Reserve's emergency authority to lend money with security.[58]

There were many laws and regulations needed to stabilize the economy. Despite having many, they weren't always effective, and sometimes they couldn't be used without going beyond the law. The

[56] Jaffee, D., & Quigley, J. M. (2013). *The future of the government-sponsored enterprises: The role for government in the US mortgage market.* In E. L. Glaeser & T. M. Sinai (Eds.), *Housing and the financial crisis* (pp. 361-417). University of Chicago Press.
[57] Tooze, A. (2018). *Crashed: How a decade of financial crises changed the world*. Penguin, 44-45.
[58] Alvarez, S. G., Baxter, T. C., Jr., & Hoyt, R. F. (2020). *The legal authorities framing the government's response.* In B. Bernanke, T. F. Geithner, H. M. Paulson, & J. N. Liang (Eds.), *First responders: Inside the U.S. strategy for fighting the 2007-2009 global financial crisis* (pp. 144-170). Yale University Press.

president could declare a bank holiday to close all banks but had no other special powers for financial emergencies. Unlike some foreign finance ministries, the U.S. Treasury had no special emergency powers, except controlling the Exchange Stabilization Fund (ESF), worth about $50 billion. Furthermore, the Securities and Exchange Commission (SEC) could halt stock trading but couldn't provide emergency credit to a failing broker-dealer. No federal agency had the authority to handle failing shadow banking system players or acquire troubled assets and inject capital into traditional financial firms. This contrasted with other countries like the UK and Switzerland, which had such powers during the crisis.

The Federal Reserve's monetary policy tools were powerful but couldn't be specifically tailored to the crisis's needs, as they were designed to address broad economic issues. The lack of tools to address nonbank financial firms significantly influenced the government's response to the financial system and economic threats. Until October 2008, the only tool for these issues was the Fed's emergency authority to lend on a secured basis. [59]

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[59] Alvarez, S. G., Baxter, T. C., Jr., & Hoyt, R. F. (2020). *The legal authorities framing the government's response.* In B. Bernanke, T. F. Geithner, H. M. Paulson, & J. N. Liang (Eds.), *First responders: Inside the U.S. strategy for fighting the 2007-2009 global financial crisis* (pp. 144-170). Yale University Press.

Annex 3 – The German economy and its history

After World War II, Germany's economy was in ruins with its cities, factories, and transportation systems heavily damaged. The country's sovereignty was lost, and it was divided into zones controlled by the United States, Great Britain, France, and the Soviet Union. The post-war period was marked by severe hardships, including inadequate housing and reliance on the black market. However, significant economic reforms initiated a remarkable recovery.

One of the critical measures was the currency reform of June 20, 1948, which introduced the Deutsche Mark (DM), replacing the devalued Reichsmark (RM) in the three western zones. This reform almost immediately led to the appearance of consumer goods in stores, sparking a period of rapid economic growth known as the "Wirtschaftswunder" or economic miracle. Between 1948 and 1952, West Germany's Gross National Product (GNP) grew by 67% in real terms, further expanding at an average annual rate of 7.6% from 1952 to 1958, and about 5% into the 1960s. During this period, workers' wages increased by 79% in real terms between 1949 and 1959.

The foundation of this economic resurgence was the "Soziale Marktwirtschaft" or social market economy, which sought to combine free-market capitalism with social policies. This system aimed to balance the freedom of the market with the need to ensure fair competition and prevent monopolies. It allowed individuals to pursue self-interest within a regulated market that protected consumers and promoted social welfare. The concept was embraced by the Christian Democratic Union/Christian Social Union (CDU/CSU) and became central to West Germany's economic policy.[60]

From the 1970s onwards, the German economy began to show signs of structural challenges. The economic miracle started to slow down. This decline was partly due to the inflexibility of traditional institutions, which struggled to adapt to new economic realities such as globalisation and reunification.

By the 1990s and early 2000s, Germany was often referred to as the "sick man of Europe." This moniker stemmed from the country's high unemployment rates, slow economic growth, and perceived overregulation and bureaucracy. The unemployment and long-term joblessness, particularly among unskilled workers, became endemic issues. The economic policies and labour market regulations of

[60] Spicka, M. (2018). *Selling the Economic Miracle.* Berghahn Books, 1- 4.

the time were seen as insufficiently flexible to cope with the challenges posed by a globalising world and the economic integration of East Germany after reunification.[61]

A significant turning point came in the early 2000s under Chancellor Gerhard Schröder's government, which implemented the "Agenda 2010" reforms. These reforms aimed to improve labour market flexibility and reduce welfare dependency. Key measures included the Hartz reforms, which liberalised temporary employment, merged unemployment and social assistance into a single benefit, and introduced policies to incentivise work. These changes helped reduce unemployment and increase employment rates, laying the groundwork for a more dynamic and resilient economy. The reforms were controversial but earned praise for breaking down insider-outsider problems in the labour market and increasing overall employment. Additionally, the collective bargaining system was decentralised, further enhancing labour market flexibility. These structural changes, combined with Germany's strong export performance, significantly boosted economic growth and stability, helping Germany emerge from the shadow of its "sick man" status. Post-2000, Germany's economic transformation continued, marked by sustained export growth and strong industrial production. The country became a leading exporter of high-quality manufacturing goods, benefiting from globalisation and the opening of new markets.[62]

[61] Funk, L. (2014). *Why has the German Job Market Done Astonishingly Well Despite the 2008–2009 'Great Recession'? New Economic Miracle, Institutional Transformation or Beggar-thy-Neighbour Policies?.* Perspectives on European Politics and Society, 15(3), 305-321.
[62] Funk, L. (2014). *Why has the German Job Market Done Astonishingly Well Despite the 2008–2009 'Great Recession'? New Economic Miracle, Institutional Transformation or Beggar-thy-Neighbour Policies?.* Perspectives on European Politics and Society, 15(3), 305-321.

Annex 4 – Plagiarism rules awareness statement

Scientific integrity is the foundation of academic life. Utrecht University considers any form of scientific deception to be an extremely serious infraction. Utrecht University, therefore, expects every student to be aware of, and to abide by, the norms and values regarding scientific integrity.

The most important forms of deception that affect this integrity are fraud and plagiarism. Plagiarism is the copying of another person's work without proper acknowledgement, and it is a form of fraud. The following is a detailed explanation of what is considered to be fraud and plagiarism, with a few concrete examples. Please note that this is not a comprehensive list!

If fraud or plagiarism is detected, the study program's Examination Committee may decide to impose sanctions. The most serious sanction that the committee can impose is to submit a request to the Executive Board of the University to expel the student from the study program.

Plagiarism is the copying of another person's documents, ideas or lines of thought and presenting it as one's own work. You must always accurately indicate from whom you obtained ideas and insights, and you must constantly be aware of the difference between citing, paraphrasing and plagiarizing. Students and staff must be very careful in citing sources; this concerns not only printed sources, but also information obtained from the Internet.

The following issues will always be considered to be plagiarism:

- cutting and pasting text from digital sources, such as an encyclopedia or digital periodicals, without quotation marks and footnotes;
- cutting and pasting text from the Internet without quotation marks and footnotes;
- copying printed materials, such as books, magazines or encyclopedias, without quotation marks or footnotes;
- including a translation of one of the sources named above without quotation marks or footnotes;
- paraphrasing (parts of) the texts listed above without proper references: paraphrasing must be marked as such, by expressly mentioning the original author in the text or in a footnote, so that you do not give the impression that it is your own idea;
- copying sound, video or test materials from others without references, and presenting it as one's own work;

- submitting work done previously by the student without reference to the original paper, and presenting it as original work done in the context of the course, without the express permission of the course lecturer;
- copying the work of another student and presenting it as one's own work. If this is done with the consent of the other student, then he or she is also complicit in the plagiarism;
- when one of the authors of a group paper commits plagiarism, then the other co-authors are also complicit in plagiarism if they could or should have known that the person was committing plagiarism;
- submitting papers acquired from a commercial institution, such as an Internet site with summaries or papers, that were written by another person, whether or not that other person received payment for the work. The rules for plagiarism also apply to rough drafts of papers or (parts of) theses sent to a lecturer for feedback, to the extent that submitting rough drafts for feedback is mentioned in the course handbook or the thesis regulations. The Education and Examination Regulations (Article 5.15) describe the formal procedure in case of suspicion of fraud and/or plagiarism, and the sanctions that can be imposed.

Ignorance of these rules is not an excuse. Each individual is responsible for their own behaviour. Utrecht University assumes that each student or staff member knows what fraud and plagiarism entail. For its part, Utrecht University works to ensure that students are informed of the principles of scientific practice, which are taught as early as possible in the curriculum, and that students are informed of the institution's criteria for fraud and plagiarism, so that every student knows which norms they must abide by.

I hereby declare that I have read and understood the above.

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Student number: 1362275
Date and signature: June 17, 2024