

Issue 1

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Youth in Policy

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The Journal *of Policy Analysis*

Elizabeth Warren's Student Debt Policy: An Analysis

Alexander Zeng, University of Minnesota Law School

Conditional Cash Transfers: An Overview

Carleigh Salem, Juno Lim, Kayla Batten, Mac Abraham, Suebin Lee

Combating Air Pollution in the Metro-Atlanta Area

Bailey Austin, Georgia Institute of Technology

How Big Business Won the Class War:

Domestic Affairs, Foreign Policy, and International Solidarity

Nicholas Trombetta, University of North Carolina at Chapel Hill '19

The Journal of Policy Analysis

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Dear reader,

Thank you for picking up—virtually, for now—this inaugural issue of *The Journal of Policy Analysis*. Our periodic academic journal publishes original research and analysis regarding national, international, social, and economic policy. We welcome inquiry-driven papers that employ diverse methods and offer precise, compelling insights.

As an entity of the Institute for Youth in Policy (YIP), “policy over party” is our guiding principle. YIP is a nonprofit, nonpartisan organization that empowers young adults through policy education. We work with 400 high school, college, and graduate students through 27 student-run organizations, and we receive over 300,000 website visits each month.

In everything we do, we prioritize constructive discourse of high academic quality. Each of our papers is meticulously edited by *The Journal’s* experienced student staff. We evaluate each citation of every paper for adherence in content, degree, and tone to a reliable source. Our academic papers additionally undergo a double-blind peer-review process, through which subject experts affiliated with credible universities and research institutions evaluate each paper’s coherence and contribution to the field. These peer reviewers volunteer their time and expertise, and I am deeply grateful for their generosity. Through the team’s dedication to their work, *The Journal* is able to publish accurate, sound argumentation that meets the standards of our readers, the Institute for Youth in Policy, and the greater academic community.

I am also grateful to this issue’s staff. Thank you for committing great effort to a nascent work; I hope you are as proud as I am of this first issue. Thank you all:

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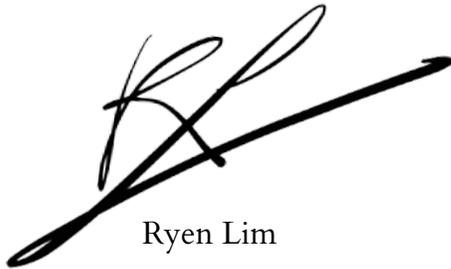
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Once again, thank you to our readers. If you would like to submit to *The Journal*, please see instructions at bit.ly/YIPJournalSubmissions. We also accept letters, which must respond to a paper or papers published in this issue. We welcome you to invoke new or existing research to support or challenge conclusions presented by our authors.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'R. Lim', with a long horizontal stroke extending to the right.

Ryen Lim

Editor-in-Chief

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Letter from the Executive Director:

Over the last forty years, there has been an unfortunate increase in policy-based divisiveness throughout the United States. The Institute for Youth in Policy (YIP) was founded in July of 2020, primarily on the basis of effectively reengaging young adults in politics through a constructive lens, working to reverse this divisive trend.

Through nonpartisan research, an instrumental good, we spark meaningful conversation and utilize it as a means to an end—a revitalized country where richness and diversity of thought are commonplace and prevailing. The Journal of Policy Analysis is a perfect embodiment of YIP's vision and is off to a successful start with this strong issue!

A handwritten signature in black ink, appearing to read 'P. Kramer', with a long horizontal stroke extending to the right.

Paul Kramer, Executive Director

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Academic Papers

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Carleigh Salem, Juno Lim, Kayla Batten, Mac Abraham, Suebin Lee,
New York University

Combating Air Pollution in the Metro-Atlanta Area

Bailey Austin, Georgia Institute of Technology

Elizabeth Warren's Student Debt Policy: An Analysis

Alexander Zeng

University of Minnesota Law School

Abstract:

One of Elizabeth Warren's main campaigning points in the 2020 Democratic Party Presidential Primaries was her policy to cancel student debt and make public college tuition-free. This paper analyzes the potential economic and legislative impacts on the United States if such a proposal were to be implemented and offers some recommendations accordingly.

I. Introduction and History

On April 22, 2019, as part of her 2020 presidential campaign, Massachusetts Senator Elizabeth Warren unveiled her proposal to cancel student debt and make public college tuition-free. A study by the Pew Research Center revealed that 81 percent of Democratic voters support making public colleges and universities free.¹ Moreover, the popularity of college affordability acts was reflected in the policies of other Congressional representatives, such as Hawaii Senator Brian Schatz's Debt-Free College Act and fellow 2020 presidential candidate and Vermont Senator Bernie Sanders' bill, which would eliminate tuition and fees at public colleges for students whose families earn less than \$125,000 yearly. Free universal education remains an important topic in the cost-benefit analysis of American education and the economy. Warren's proposal, however, seems to be the most extreme example of this policy: it not only makes public colleges free, but also cancels or partially relieves 95 percent of borrowers of their student debt. In addition to cancelling student debt, Warren also plans to withhold federal funding from for-profit colleges and dramatically increase spending on higher education.²

According to Warren's analysis, the estimated cost for this plan is 1.25 trillion dollars over ten years, with an upfront cost of 640 billion dollars in the initial one-time debt cancellation.³ This would forgive up to \$50,000 in federal and private student loan debt for 42 million Americans. Warren estimates that her plan would help 95 percent of the current 45 million borrowers, and more than 75 percent of borrowers would have all their debt cancelled. The automatic debt cancellation would be distributed in tiers:

- If a household earns less than \$100,000, then \$50,000 in student debt is cancelled for that household.
- If a household earns more than \$100,000 and less than \$250,000, then one less dollar would be forgiven for every three dollars made above \$100,000.
- If a household earns over \$250,000, then no debt will be cancelled.

¹ Gregorian, Darih. "Growing Student Debt Crisis: Candidates Say Cancel It, Free College, Refinance." NBCNews.com, NBCUniversal News Group, 3 May 2019.

² "A Great Public School Education for Every Student." Elizabeth Warren.

³ Looney, Adam. "How Progressive Is Senator Elizabeth Warren's Loan Forgiveness Proposal?" Brookings, Brookings, 29 Apr. 2019.

This plan will initially be financed through Warren’s ultra-wealth tax proposal: a 2 percent tax on every dollar above 50 million dollars, and 3 percent tax on every dollar above 1 billion dollars.⁴

II. Economic Analysis

Warren intends her policy to rearrange wealth in the country so that the lower- and middle-class benefits to the upper-class’ financial detriment. The ultra-wealth tax proposal’s revenue would be 2.75 trillion dollars over ten years—more than enough to offset the estimated 1.25 trillion dollar cost of the universal college and debt cancellation plan.⁵ This plan may also stimulate the economy by freeing up income in many middle-class families. More disposable income may stimulate home ownership rates, small business ventures, and college graduation rates, which would likely lead to even more economic stimulation.

There are, however, differing projections of the expected costs and expected benefits. Mark Zandi, Chief Economist of Moody’s Analytics, says Warren’s plan would cost only 700 billion dollars over ten years after accounting for the boost it would provide to the economy.⁶ Furthermore, there is no consensus on how much revenue the ultra-wealth tax could achieve, if it could even be implemented. Warren’s tax could even be deemed unconstitutional, since the 16th Amendment states that Congress can “lay and collect taxes on income,” not on wealth. Other economists estimate that, if the tax were implemented, the wealth tax would at best bring in only 40 percent of the originally estimated \$2.75 trillion, with an actual expected revenue of just 12 percent of the original estimate.⁷ Additionally, the Internal Revenue Service (IRS) would incur great costs in calculating each individual’s net worth over several years, further increasing the expected costs of Warren’s proposal.

Under ideal circumstances, Warren’s plan would be efficient, since the expected benefits would far outweigh the expected costs. The tax proposal used in tandem with the student loan debt forgiveness policy would redistribute wealth according to Kaldor-Hicks efficiency—to the benefit of the underprivileged, at the expense of the ultra-wealthy. Forgiving student loan debt would increase wealth in middle-class families, allowing for

⁴ Farley, Robert. “Facts on Warren's Wealth Tax Plan.” FactCheck.org, 28 June 2019.

⁵ *Id.*

⁶ “Fact-Check: Democratic Debate from Houston | CNN Politics.” CNN, Cable News Network, 13 Sept. 2019.

⁷ Emmanuel Saez and Gabriel Zucman, “Letter from Emmanuel Saez and Gabriel Zucman to Elizabeth Warren on her Wealth Tax Proposal.”

more home ownership and businesses. The population as a whole would benefit from more people claiming the opportunities provided through higher education.

Under full consideration of the possible obstacles, Warren’s plan would most likely not be efficient, as the expected costs are most likely underestimated. Although Warren plans to leave no assets exempt from her tax proposal and maintains provisions for tax evasion, it is still possible for wealth to be shifted around and taxes to be evaded or mitigated to a certain extent. These factors could mean that the tax revenue over ten years would be far less than the expected 2.75 trillion dollars. Furthermore, transaction costs and administrative costs are barriers of entry still too high for students, private lenders, litigation, and tax firms. Not only is wealth reviewed on a case-by-case basis by the IRS, but lenders and students in private agreements must also be reviewed on a case-by-case basis by the administration in charge of this policy.

Additionally, according to Adam Looney, Senior Fellow at the Brookings Institution, the distribution of debt relief under Warren’s proposal is regressive, as the bottom 60 percent of borrowing households only receive about 34 percent of the national relief amount.⁸ The bottom 20 percent of households receive only 4 percent of the relief amount. In fact, \$50,000 in student loan forgiveness is overly generous, as 98 percent of students starting a four-year degree in 2009 had borrowed less than \$50,000 by 2015. In this way, the debt cancellation plan’s costs are overestimated and its effects disproportionately benefit the upper-class rather than those in need.

III. Concluding Remarks

To Warren’s credit, however, there is a need for action regarding the cost of higher education in the United States. Warren’s policy is a reaction to rising costs and crippling debt now inherent in pursuing a higher education. Tuition has doubled in the past 30 years and total student loan debt is over 1.5 trillion dollars in the United States, with an average borrower debt of over \$20,000 per student.⁹ These problems compound the existing dilemma of income inequality present across gender and race, exacerbating the restriction of social mobility in American society. Warren’s plan aims to reduce the wealth gap by providing opportunities to increase wealth for minorities and other less privileged groups. The proposal also increases the accessibility of higher education for everyone, especially lower-income families, by making two- and four-year public schools free. In doing so,

⁸ Looney, “How Progressive Is Senator Elizabeth Warren’s Loan Forgiveness Proposal?”

⁹ Skorup, Jarrett. “The Student Debt Problem Is Widely Misunderstood – Here Are Some Solutions.” Mackinac Center for Public Policy, 24 Oct. 2019.

Warren hopes to ensure that lower-income and middle-class students can compete for good jobs on a level playing field.

Warren additionally planned on creating a 50 billion dollar fund for historically black colleges and universities and minority-serving institutions; offering additional federal funding to states with improved enrollment and graduation rates for students of color and lower-income students; banning for-profit colleges from receiving federal money; and banning public colleges from considering citizenship status or criminal history. These measures further assist lower-income families and punish institutions that have overlooked these less privileged individuals and groups.

While Warren's policies are definitely a step in the right direction, debt cancellation on a large scale is not feasible and often too costly. Warren's plans to finance her education policies are also potentially legally problematic and financially overly optimistic. To make this plan efficient, a more reasonable tax should be implemented, such as a tax on the ultra-wealthy's income. Since the revenue from this tax would likely be less than the initial proposed tax, the policies' costs must be tempered to correspond with the expected revenue.

The most efficient version of Warren's plan would limit its scope to free universal public college. The tax revenue would be used to fund public colleges and make tuition either low-cost or free. While this plan would not free up middle-class households' income for other economic stimulation, it would still achieve the long-term benefits of availing higher education to more people, while circumventing the costs of evaluating each individual household's forgiveness eligibility. The benefits of free universal public college would also apply more proportionally across minority groups and lower-income groups than it would across the upper-class, bringing continuous opportunities to each generation of students.¹⁰

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¹⁰ Looney, "How Progressive Is Senator Elizabeth Warren's Loan Forgiveness Proposal?"

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- "Warren Unveils Universal Child Care and Early Learning Proposal: U.S. Senator Elizabeth Warren of Massachusetts." *Warren Unveils Universal Child Care and Early Learning Proposal | U.S. Senator Elizabeth Warren of Massachusetts*, 18 Feb. 2019, www.warren.senate.gov/newsroom/press-releases/warren-unveils-universal-child-care-and-early-learning-proposal.

Conditional Cash Transfers: An Overview

Carleigh Salem

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Abstract:

Children who grow up in poverty are disadvantaged both physically and biopsychosocially. This affects their future outcomes, and makes them more likely to earn below the poverty line as adults and raise their children in those same conditions, in turn creating a cycle of poverty. Consequently, it is crucial to address and prevent child poverty to ensure proper development and positive future outcomes. One of the interventions developed to combat child poverty are conditional cash transfer programs (CCTs), which offer cash rewards to impoverished families in exchange for fulfilling “healthy behavior” requirements, which differ across interventions. This paper conducts a comprehensive overview of CCTs from development to implementation and examines specific case studies.

I. Introduction

Children that grow up in poverty are vulnerable to hunger, insecurity, and turmoil; poverty also negatively impacts a child's social, emotional, and cognitive development. Those who grow up in poverty are at risk for low academic performance, behavioral problems, and social and emotional development difficulties. Poverty is also associated with increased levels of stress, which is “a known causal factor through which poverty impacts developmental outcomes.”¹¹ Experiencing stress has shown to have adverse effects on the immune system, cardiovascular system, and neuroendocrine and cortical systems, which affect learning and decision-making ability.

These negative effects on both physical and mental health persist throughout life and can be difficult to treat through intervention in adulthood. Prevention is critical. Moreover, given the importance of education in securing well-paying employment, childhood poverty and low academic achievement can also be linked to poverty as an adult. When compared to affluent families, poverty exposes children to a lack of social and emotional parental support, family instability, and violence, and puts them at higher risk of separation from their families.¹² Neighborhoods and communities with higher rates of poverty tend to be more dangerous and have poorer air and water quality, inaccessible municipal services, and substandard public education. Consequently, it is crucial to address and prevent child poverty to safeguard proper development and positive future outcomes.

Multiple interventions have been developed to try and combat poverty's pervasive and cyclical nature. Many countries and areas that have high rates of poverty—such as Brazil, Malawi, Mexico, and New York City—have chosen to implement conditional cash transfer (CCT) programs.¹³ CCT programs are social intervention programs that offer cash incentives as rewards for healthy behaviors. Beneficiaries targeted by CCT programs are families and neighborhoods that live below the poverty line, calculated relative to the area, and low-income and middle-income residents of developing countries. Receiving cash rewards is contingent on specific behavioral criteria, which vary depending on the particular program but often include the child maintaining regular attendance at public school, regular doctor's office visits, vaccinations, and more. If these conditions are met, the families of the recipients immediately receive cash, which can be used however they choose. Many families opt to use this money on necessities such as food, school uniforms

¹¹ Haynie, I. (2014, June). Childhood poverty, living below the line.

¹² *Id.*

¹³ Lindert, K. (2014, December). *Conditional Cash Transfers (CCTs)*. Lecture presented at The World Bank: Social Safety Net Core Course.

and supplies, or supplemental income if the child they place in school would normally be working. The short-term goal of CCT programs is to financially support low-income families while increasing and normalizing the aforementioned healthy behaviors; the long-term goal is to help the younger generations out of poverty, break the cycle of poverty entirely, and minimize socioeconomic disparities.

II. Case Studies: Brazil and Mexico

Prior to the 2000s, countries in Latin America were struggling with some of the highest poverty rates and socioeconomic disparity. Brazil and Mexico were two of the first countries to implement CCTs on a large scale with positive results. Both programs are based on multiple behavioral economy theories, including behaviorism, ecological perspective, and self-efficacy and self-determination theories. Behaviorism and self-determination theories go hand in hand in that they both aim to implement or reinforce a behavior through incentive. According to behaviorism, incentivizing good behavior will cause that behavior to increase. According to self-determination theory, incentivizing good behavior through extrinsic motivation may help internalize that behavior, and the individual will eventually perform that behavior out of intrinsic motivation. Ecological perspective holds that a person's poverty and their ability to exit it is influenced by multiple systems: micro-, meso-, exo-, macro-, and chronol-systems. If one's environment is not conducive to improvement and external support, the person may never have the means to break out of their situation. Lastly, self-efficacy theories hold that one's lack of self-efficacy, the sense that one cannot break out of the cycle, contributes to the chronic and intergenerational nature of poverty.¹⁴ By recognizing these key theories, these governments were able to develop programs that will not only provide immediate social support, but also inspire following generations to continue these desired behaviors for their own sake.

Between 1995 and 2003, Brazil had an estimated amount of over 20 million people considered to be below the international poverty line; prior to 1995, Brazil was considered the second in the world in terms of income inequality. To combat these issues, Brazil's federal government developed some of the first CCT programs including Bolsa Escola (school-based) and Bolsa Alimentação (nutrition-based). In 2003, these programs as well as the cash transfer programs Cartão Alimentação (food transfer program) and Auxílio-Gás (cooking gas compensation) were consolidated into one CCT called Programa Bolsa

¹⁴ Wolf, S., Aber, J. L., & Morris, P. A. (2013). Drawing on psychological theory to understand and improve antipoverty policies: The case of conditional cash transfers. *Psychology, Public Policy, and Law*, 19(1).

Familia.¹⁵ The original cash transfer programs were showing potential, but their fragmented approach to attack individual aspects influencing poverty was not effective. By consolidating into one CCT program, they effectively increased their reach and impact on the country. Today, the Bolsa Familia program is one of the largest CCT programs in the world with over 46 million beneficiaries.¹⁶

Mexico similarly had troubling high rates of extreme poverty as well as inequality. In response, there were various anti-poverty programs in place including TORTIVALES, the subsidized tortillas program, and PRONASOL, the National Solidarity Program. However, TORTIVALES cost the government 40 pesos to transfer 100 pesos, meaning it was not cost-effective. As for PRONASOL, it was found to be susceptible to political influence and ineffective at targeting the populations who would benefit most. Despite these vulnerabilities, Mexico was beginning to see some decline in its poverty rates until the Peso Crisis of 1994 caused a major setback.¹⁷ As seen in the poverty rates data for Mexico, there was a 16 percent spike between 1994 and 1996, but, fortunately, PROGRESA would be introduced in the following year of 1997, and it would correspond to the downward trend in poverty rates that continues today.¹⁸ PROGRESA is the original name of the popular and thoroughly researched CCT program in Mexico. PROGRESA was initially implemented as a randomized experiment where potential beneficiaries were randomly chosen to either be in the experiment group in which they would receive the incentives, or they would be placed into the control group in which no incentives were given. Unfortunately, this meant that certain people who could benefit from the program would not receive the support. On the other hand, designing the intervention this way gave researchers the ability to look at the progress of the treatment group compared to the control group and make causal inferences. Beneficiaries were chosen through a two-step process in which a community was first chosen, and then a random household within that local community was designated as a beneficiary. The beneficiaries' compliance and improvement were then monitored to measure the effectiveness of the intervention.¹⁹ Today this program is commonly referred to as Oportunidades.

Often, government agencies oversee managing the intervention programs in their

¹⁵ *Bolsa Familia in Brazil*. Centre For Public Impact (CPI). (n.d.).

¹⁶ *Id.*

¹⁷ Coady, D. (2003, February). *Alleviating Structural Poverty in Developing Countries ...* World Bank.

¹⁸ *Mexico Poverty Rate 1989-2021*. MacroTrends.

¹⁹ Behrman, J. R., & Todd, P. E. (1999). *Randomness in the Experimental Samples of PROGRESA (Education, Health, and Nutrition Program)*.

countries, including delivery of the cash transfers and registration of eligible participants. They require effective coordination in the management of these aspects of the program, but they also need to be well-funded. Governments must be able to monitor and enforce the conditions of the cash transfer, as well as be able to target participants effectively. There are many ways to target participants, such as geographical targeting, self-targeting, and targeting based on measures typically associated with poverty.²⁰ There is no training necessary for the implementation of CCT programs unless they are doing regular family training meetings. In these meetings, a family psychologist works with the people implementing the intervention to touch on areas they think are critical. The success of the implementation of CCTs relies heavily on the support it receives financially. This financial support comes either from the government of the place of implementation, or from private backers. The actual source of this support is dependent on the implementation, as they are not all funded the same way.²¹

The success of the CCT implementation also depends significantly on the environmental context and the program design itself. The extent of poverty in the community, as well as the opportunities and resources that exist to support the community through the program, affects the success of the CCT. For optimal productivity of the program, the design must allow for effective and sufficient transfers. They must be consistent, “appropriately channelled, and complemented by asset-accumulation and asset-protection interventions.”²² An example of the positive effects on productivity this program can bring about is the Dowa Emergency Cash Transfer (DECT) program in Malawi. This program saw “economic multiplier impacts exceeding two Kwacha for every Kwacha disbursed,” suggesting significant economic gains following implementation.²³ Other things that affect the success of CCTs include additional services and interventions such as nutrition programs to help protect the health of the community, effective monitoring of the different mechanisms of the program, the processes of payment, the quality of benefits provided, and more. To help promote this, “South-south cooperation on different aspects of design and system strengthening for scaling up has been very active, particularly between Brazil, Ghana and Kenya.”²⁴

²⁰ United Kingdom, UKaid, Policy Division. DFID Cash Transfers Evidence Paper, DFID, 2011.

²¹ Ozler, Berk. “How Should We Design Cash Transfer Programs?” World Bank Blogs, 6 Feb. 2020.

²² UKaid. DFID Cash Transfers Evidence Paper, DFID.

²³ *Id.*

²⁴ *Id.*

III. Methods of Evaluating Program Impacts

The implementation of CCTs is not perfect, however. There are two main aspects of implementation that can cause the intervention to be less effective. First, the methods used to target the individuals for the program are all imperfect in some way. To target more efficiently, they must research the distribution of poverty within the context of intervention, the costs of targeting, and political acceptability. This usually means incorporating two or more forms of targeting, but utilizing multiple targeting strategies increases effectiveness. Second, payment methods can potentially cause issues for implementation. Some methods can lead to fraud and corruption in the program, as well as bring on high costs. This has been addressed in some places with electronic payments. These methods take some strain off of the government by delivering the transfers more directly to the recipients, cutting out opportunities for fraud.²⁵ About 45 percent of CCT programs now pay their participants electronically. This can increasingly include the poor in financial and banking systems, which was a source of inaccessibility in the program as well.²⁶

To evaluate the findings from these CCT programs, researchers have used several different methods. The first commonly used method of collecting and evaluating data was running randomized control trials which assigns half of the families to a control group that does not receive the rewards and half of the families to an experimental group that do receive cash rewards if they meet the required conditions. These two groups are compared after the conclusion of the study to find the effects of the CCT programs. A second method of evaluating the information collected is by finding “proxy variables for the main program characteristics of interest” through literature review and then using models to link those datasets to “indicators of quality of implementation” reported by municipalities and health and education services.²⁷ Yet another method, used by the Bolsa Familia program in Brazil, is counting site visits to the main interface between claimants and the program. Researchers visited six municipalities in three states in the northeast of Brazil, as the main interface occurs at the municipal level.²⁸ Analyzing household data is also a common method used by many researchers of CCT programs, usually done based on probit analysis, where they analyze the immediate and static effects cash transfers have on participating families.²⁹ A

²⁵ *Id.*

²⁶ *Id.*

²⁷ Van Stolk, C., & Patil, S. (2015). Evaluating conditional cash transfer programmes The case of Bolsa Familia (Research brief). RAND Europe.

²⁸ *Id.*

²⁹ UKaid. DFID Cash Transfers Evidence Paper, DFID.

downside to this method is that it does not consider the second-round effects that can arise, for instance “through behavioral changes such as families changing the amount of labor they supply.”³⁰

These methods were used to evaluate findings from many different populations around the world. For instance, Bolsa Familia includes over 13 million poor families which is around 25 percent of the Brazilian population.³¹ The aforementioned Mexican CCT program PROGRESA is also a large program which focused on “506 rural localities in seven states,” starting out as a regional program but scaling up to a large national program shortly after to cover 5 million households.³² Another notable study was in New York City, titled Opportunity NYC—Family Rewards. This study took place in six of New York City’s highest-poverty communities and involved “approximately 4,800 families and 11,000 children.”³³ Other studies involved populations of 30,000 households in Honduras, six municipalities with initial poverty rates of around 80 percent in Nicaragua, and 40 percent of total households in Ecuador.³⁴ Outcomes from CCT programs across such diverse populations allowed researchers to compare the differences in CCT implementation and results from diverse cultures, governments, and locations.

The findings from these studies showed that CCTs were successful in improving certain indicators, although some results have been inconsistent across different countries. CCTs have been successful in “raising school attendance and health service utilization,” especially in Honduras and Mexico where these indicators were lower than other countries’ in the beginning of the program.³⁵ Furthermore, CCTs were shown to have “successfully reduced infant morbidity and mortality, as well as obesity, hypertension and diabetes in adults” in Mexico, and reduced incidences of diarrhea in children “by 3–10 percent” in Honduras and Colombia.³⁶ Additional positive effects have been seen in multiple CCT studies such as a reduction in current poverty, material hardship, hunger, and

³⁰ *Id.*

³¹ Van Stolk, Evaluating conditional cash transfer programmes.

³² Millán, Long-Term Impacts of Conditional Cash Transfers: Review of the Evidence. The World Bank Research Observer, 34(1), 119–159.

³³ Riccio, James A., and Cynthia Miller. “New York City’s First Conditional Cash Transfer Program.” Opportunity NYC — Family Rewards, May 2016.

³⁴ Millán, Long-Term Impacts of Conditional Cash Transfers: Review of the Evidence. The World Bank Research Observer, 34(1), 119–159.

³⁵ Doetinchem, Ole, et al. “Conditional Cash Transfers: What’s in It for Health?” Technical Briefs for Policy-Makers, no. 1, 2008.

³⁶ *Id.*

housing-related hardships.³⁷ Studies have also shown that CCTs helped parents increase savings and reduce reliance on cash loans, increased sustainability of families as they “improved livelihoods in the face of vulnerability and shocks,” increased graduation rates, decreased child labor rates, and substantially increased school enrollment rates.³⁸

However, alongside these positive changes, there were indicators that showed no notable changes such as lifetime earnings, labor market outcomes, overall school achievement, vaccination rates, and social inequality.³⁹ There was also unexpected spillover effects, mainly in countries with child labor. For example, a CCT program in Colombia found that parents concentrated resources towards children who became program beneficiaries while taking away resources from their siblings who did not qualify.⁴⁰ In particular, sisters of student beneficiaries, began working more and attending school less as compared to families that received no transfers.

These CCT studies solidified the correlations between positive outcomes and the quality of educational and health services available, and exposed the degree of integration between social welfare programs, supporting public services, and higher poverty levels; they further emphasize that momentary monetary gain must be supported by solid structural reform and maintenance to yield the best possible results for families, individuals, and the country.⁴¹ They also support the idea that for already positive conditions, CCT programs effect no significant changes, particularly as shown by New York City’s Family Rewards program. For this program, CCTs had little impact on school outcomes and attendance rates for elementary and middle school students as well as on the families’ use of preventive medical care, as these rates were already high and had little room for change.⁴² As known from previous intervention studies, early education and family stability is crucial for healthy child development and future success. CCTs not only encourage families to partake in early education, but were also associated with a “10 percent decrement in aggressive/oppositional symptoms” across gender and ethnicity.⁴³ Although many positive effects of CCTs were

³⁷ Riccio, “New York City’s First Conditional Cash Transfer Program.”

³⁸ UKaid. DFID Cash Transfers Evidence Paper, DFID.

³⁹ Millán, T. M., Barham, T., Macours, K., Maluccio, J. A., & Stampini, M. (2019). Long-Term Impacts of Conditional Cash Transfers: Review of the Evidence. *The World Bank Research Observer*, 34(1), 119–159.

⁴⁰ Linden, L., Bertrand, M., Barerra-Osorio, F., & Perez-Calle, F. (2011). Improving the Design of Conditional Transfer Programs: Evidence from a Randomized Education Experiment in Colombia. *American Economic Journal: Applied Economics*, 3(2), 167–195.

⁴¹ Van Stolk, Evaluating conditional cash transfer programmes.

⁴² Riccio, “New York City’s First Conditional Cash Transfer Program.”

⁴³ Ozer, E. J., Fernald, L. C., Manley, J. G., & Gertler, P. J. (2009). Effects of a Conditional Cash Transfer Program on Children's Behavior Problems. *Pediatrics*, 123(4), 630–637.

varied between populations, an intervention such as this which focuses on investing in basic human capital needs may cause long-term, positive ripple effects on children’s educational and health development—especially if it is well-supported and takes place early on in their development.

The main overarching critique of CCT programs is that they are a temporary solution, and they cannot be implemented in place of structural reform. They do not address the underlying causes of poverty, and in some cases, they mostly only helped during the time the implementation was occurring.⁴⁴ Another critique is that the implementation of these programs is costly, and many case study subjects—including Oportunidades and Bolsa Familia—had inclusion errors. In Bolsa Familia, some subjects said that they preferred cash and food, or food instead of cash, since there had been variations of transfers proposed, including one where they changed the amount of transfer based on food prices. This version was not well received. Finally, there was also a problem with polygamous families not getting the resources they needed because the husband would file all his wives as dependents in the same household, as opposed to different households.⁴⁵

IV. Conclusion: Continuing Implementation Challenges

Conditional Cash Transfers are being used across the globe in communities that are deemed low-income or in poverty by their governments. The spread of CCTs throughout various countries is not due to one parent organization but rather the acts of individual governments. Thus, CCTs rely on their governments for funding, and often go smoothly for governments and communities. For example, in the Philippines, the Pantawid Pamilya Pilipino Program is a government-funded CCT that provides cash to beneficiary households with children aged 0–14 years located in poor areas. The cash grants range from P500 (11 USD) to P1,400 (32 USD) per household per month, depending on the number of eligible children. It also provides households with children aged 6–14 education grants if their children maintain a class attendance rate of 85 percent every month. This program exists to improve the children’s health and education in poor households. To do this, the program requires beneficiaries to visit health centers regularly, send their children to school, and

⁴⁴ Matthews, Dylan. *Study: Giving Out Cash in Uganda Helped After 4 Years. After 9 Years, Not So Much*. Vox. 2018.

⁴⁵ Ulrichs, M., and Roelen, K. (2013). Equal Opportunities for All? A Critical Analysis of Mexico's Oportunidades. IDS Working Papers, 2012(413), 1–23.

undertake preventive check-ups for pregnant women in their households.⁴⁶

However, because CCTs are widely dispersed throughout countries and the world, misuse of a program's original design can occur. CCTs often provide communities with an abundance of benefits through wide and frequent distribution, but sustainability and program fraud can become a problem if distribution is not monitored and updated. There are high levels of inclusion and exclusion issues when it comes to targeting needy communities. Since CCTs are federally funded, the government must choose which poor communities are more in need of cash. Often, low-income communities can be left out of programs because the government cannot afford to provide every poor community and household with conditional cash.

Another problematic area for CCTs is political clientelism, which has been “common in many Latin American and other developing countries, in particular linked to the abuse of social programmes in pre-electoral periods.”⁴⁷ Administrations may use CCTs to influence voter decisions to ensure that they remain in power. For example, an increase in public expenditures has been timed to coincide with elections; expenditures have been directed toward areas in which their political impact was likely to be largest, discriminating against other areas based on political calculus rather than social or poverty-based criteria.⁴⁸

Moreover, while CCTs programs are often used as short-term solutions to help certain communities out of poverty, there is evidence to support that they are less effective in the long-term. In 2008, the CCT Youth Opportunities Program was offered to small groups of young people in Uganda. Individuals were given 382 USD to learn a skilled trade that would in the long run provide them with a job. In 2012, these individuals were reevaluated and compared to a control group to see if the program had set them up for a successful future. It was found that, “relative to the control group, the program increases business assets by 57 percent, work hours by 17 percent, and earnings by 38 percent” and that many of these individuals also “formalized their enterprises and hired labor.”⁴⁹ Nine years after the intervention, these individuals were again reevaluated. While the individuals that took part in this program were earning 38 percent more money than the control group in year four, the individuals in the control group experienced very similar outcomes. By year nine, the individuals who received the conditional cash transfer were only making 4.6

⁴⁶ Delgado, F, Patricia L, and Hamanaka, R. O. *Overview of the Philippines' Conditional Cash Transfer Program: the Pantawid Pamilyang Pilipino Program (Pantawid Pamilya)*. World Bank. 2011.

⁴⁷ Alcázar, L. (2010). *The Uses and Abuses of Social Programs: The Case of Conditional Cash Transfers*. CMI.

⁴⁸ *Id.*

⁴⁹ Matthews, *Study: Giving Out Cash in Uganda Helped After 4 Years. After 9 Years, Not So Much.*

percent more than those who did not.⁵⁰ However, it should also be noted that women who were part of the intervention reported that their children were healthier than women in the control group. From this study, it can be concluded that CCTs do not significantly remove individuals from poverty. However, they can help improve household living conditions and quality of life.

CCT programs financially support low-income families while incentivizing and culturally normalizing healthy behaviors, such as school enrollment, school attendance, and health service utilization. Built on the theories of behaviorism, ecological perspective, self-efficacy, and self-determination, various federal CCT programs have achieved positive short-term outcomes across several categories, including infant morbidity and material hardship. Large, well-organized CCT systems such as Bolsa Familia have proven able to manage many recipient-clients and multiple targeting strategies. However, nationalized programs suffer inherent corruption issues, such as fraud and political clientelism. While some governments minimize fraud through direct electronic payments, CCT programs are continually weaponized and jeopardized in Latin American elections, particularly; sufficient monitoring and self-evaluation systems remain a priority. Moreover, CCT programs have achieved little to no impact on long-term outcomes such as lifetime earnings, overall academic performance, and socioeconomic equality. Even short-term impacts decrease with higher base rates—for example, little impact was seen on school attendance and preventative care utilization in New York City, where rates are already relatively high. CCTs are no replacement for structural reform that addresses the underlying causes of poverty.

Of course, modifications are possible following further evaluation. Research thus far focuses on comparative outcomes, either between recipient and non-recipient families, or before and after a family becomes a recipient. Following the success of large, unified CCT programs, evaluators could consider comparative research between members of the south-south collaboration. Even unique features, like Malawi's successful nutrition education intervention, could be replicated in analogous contexts. As in Mexico, CCT adopters and longtime administrators should be prepared to support research and multiple program iterations. Despite the concern of CCTs influencing elections and leaving out certain communities, there are good reasons for CCTs increasingly being promoted as best practice for developing countries in various parts of the world. Although the positive long-term impacts on poverty and human development of CCTs vary with implementation plans and the types of conditions required of households, significant improvements in the

⁵⁰ *Id.*

health status, educational levels, and nutritional outcomes for beneficiaries have been shown by several evaluations.⁵¹ Currently, however, CCTs boost certain wellness markers without effectively alleviating poverty on an individual or national basis.

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⁵¹ Alcázar, *The Uses and Abuses of Social Programs: The Case of Conditional Cash Transfers*.

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Combating Air Pollution in the Metro-Atlanta Area

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Abstract:

The metro-Atlanta area has grown exponentially in recent decades, increasingly degrading air quality throughout the city and its suburbs. Irreversible damage has occurred to both residents and the environment. This paper defines the policy problem, identifies important stakeholders, discusses possible policy solutions, and lays out a recommendation and strategy. By investigating and defining the problem, Atlanta can begin to plan policy solutions and promote a cleaner, greener Georgia.

I. Background and Problem Definition

Since the Reconstruction era, Atlanta, Georgia, has been the pinnacle point of innovation, culture, business, and progress in the South. The city of Atlanta has evolved and expanded exponentially, ranking fourth nationally among the fastest-growing cities between 2010–2019.⁵² This rapid growth in both population and commerce has exacerbated Atlanta’s pre-existing problems, including urban sprawl and traffic, both of which contribute to the city’s air pollution problem. Atlanta has drastically fallen behind the standards of acceptable air pollution, as measured by both Particulate Matter (PM) 10 and PM 2.5. In 2016, Atlanta residents spent 31.6 percent of their days with degraded air quality.⁵³ In addition, Atlanta averages 40 “Orange Days” each summer, meaning that the air quality imposes particular risk to children and people at risk for lung disease. The elderly, children, and those who spend significant time outdoors are more at risk for the health problems attached to air pollution, such as asthma, chronic bronchitis, emphysema, and chronic obstructive pulmonary disease. These groups are warned to avoid the outdoors at all costs. Though heavy air pollution days may not seem to have much of an effect on the general community, emergency room visits in the metro area increase by 35 percent on those days.⁵⁴

Atlanta has failed to meet national health standards for both soot and smog for several years. The trend must end. Without concrete action, the city’s air quality will worsen and not only will its citizens suffer, but commerce, real estate, and tourism will eventually feel the blow. Georgia has an obligation to its citizens to combat such a large-scale issue.

The three main causes of Atlanta's pollution can be traced to urban sprawl, exhaust—specifically associated with traffic within Atlanta, as well as heavy airport traffic—and low-quality public transportation. As previously mentioned, Atlanta’s high extent of urban sprawl is a large contributor to the metro area’s high levels of air pollution. Unlike most cities, Atlanta is not border-constricted by steep mountains or rivers. Because of this, Atlanta has continuously developed and the demand for real estate has increased, making it possible for developers to expand outward. Since the city and its suburbs are so widespread, it is nearly impossible to live and work without a car. On average, each person drives 34.2 miles daily, making Atlanta fourth in the country for highest daily driving

⁵² “Counties with the Largest Population Gains Since 2010 Are in Texas.” *The United States Census Bureau*, 26 Mar. 2020.

⁵³ “Inhalable Particulate Matter and Health (PM 2.5 and 10).” *Inhalable Particulate Matter and Health (PM2.5 and PM10)* | *California Air Resources Board*.

⁵⁴ “Facing the Facts about Atlanta's Air Quality.” *Southern Environmental Law Center*, 2005.

distance.⁵⁵ Though Atlanta's urban sprawl has allowed many to enjoy the amenities of both suburban and urban life, the city must adapt so that people can continue to enjoy the beauty of Georgia. As Atlanta continues to grow outwards, average miles driven per day will continue to rise and carbon dioxide and nitrous oxide levels will rise proportionately.

According to both the Georgia Department of Natural Resources and the U.S. Public Interest Research Group, Atlanta ranks second in the country for most air pollution from vehicles. As more and more people rely on their vehicles to commute, Atlanta's already serious traffic problem only worsens. A major concern is the release of greenhouse gases, especially nitrous oxide, which is the largest source of ozone pollution in Atlanta. Nitrous oxide is a greenhouse gas three hundred times more potent than carbon dioxide. Though it is a naturally occurring gas, humans now account for one-third of all nitrous oxide emissions into the atmosphere; vehicles emit nitrous oxide from internal combustion engines.⁵⁶ When nitrous oxide is released into the atmosphere at a greater rate than it naturally occurs, the ozone layer is depleted. Depletion of the ozone results from greenhouse gases trapping sunlight, in turn causing an increase in the heat experienced on Earth's surface. Without concrete action, the ozone will continue to suffer damage beyond repair.

Another cause of the low air quality in the city is the lack of high-quality and extensive public transportation. While it seems relatively straightforward, Atlanta's public transportation system lacks multiple necessary aspects for success. The quality of the Metropolitan Atlanta Rapid Transit Authority (MARTA) has substantially decreased since its start, causing many commuters to rely on their vehicles as a means of transportation. MARTA does not offer passengers a safe nor sanitary environment. It has become difficult to rely on MARTA due to the inaccurate arrival and departure times it projects. In a modern city like Atlanta, people expect to see technological advances reflected in the public transportation system. MARTA bus bays do not have electronic signs with departure and arrival information, leaving riders uncertain of whether they are boarding the correct bus. Riders find it discouraging when bus stops lack a map to use when determining which bus they should take. Those who chose to risk depending upon MARTA often encounter other problems, such as the lack of benches at each bus stop. When waiting for an uncertain amount of time, MARTA users would like to at least have a place to sit down, much less a small awning to shield them from unfortunate weather

⁵⁵ *Id.*

⁵⁶ Miller, Andy, and Georgia Health News. "Metro Atlanta Still Struggling With Air Pollution, Report Says." *90.1 FM WABE*, 24 Apr. 2019.

conditions. Many MARTA bus stops consist of only a pole with a MARTA sign at the top. Moreover, MARTA trains do not serve enough of the city's metropolitan communities, making it impossible for some daily commuters to use the trains at all. During busy weekends, the lack of total trains makes it difficult for MARTA users to arrive on time, causing many users to opt for other transportation services. The overall lack of funding MARTA receives makes its shortcomings outweigh its benefits. MARTA is unreliable and difficult for users to navigate, making it a failing attempt to promote air quality throughout the city.

Public transportation is a proven source of depleting air quality. This can be seen by comparing Atlanta to Chicago, Illinois, a city comparable in demographic breakdown, geographic features, and metropolitan layout; Chicago also houses one of the world's busiest airports, O'Hare. In Chicago, over 25 percent of commuters choose to use public transportation, while in Atlanta only 9.8 percent of commuters use public transportation.⁵⁷ Though there are covariants at play, such as the greenness of the cities, Chicago's air quality is notably better than Atlanta's. When rating air quality out of 100, the average air quality of Chicago is 47.6 while Atlanta's average is 31.8. Both averages are below the national average of 51.8, but considering Atlanta and Chicago are both large-scale urban areas, Chicago has managed its cities' air quality much better than Atlanta.⁵⁸ Despite covariants, Chicago's higher rate of public transportation and higher air quality shows a correlation to improved air quality and participation in public transportation.

Since the Hartsfield-Jackson Atlanta International Airport has ranked as the world's busiest airport. In 2018, Atlanta's airport served over one hundred million passengers. This extreme quantity of airport traffic has resulted in a decrease in the air quality in areas surrounding the airport. While emissions from aircraft remain lower when compared to that from vehicles, surrounding communities are still negatively impacted. Aircraft currently account for eleven percent of emissions of carbon dioxide, the most prevalent greenhouse gas, from U.S. transportation services. Compounded by globalization effects, aircraft emissions are projected to triple by 2050. When such a large amount of carbon dioxide is being released into the air, it forms an invisible layer in the atmosphere that then traps heat on Earth's surface, resulting in what is known as global warming. Although Hartsfield-Jackson does make efforts to offset its carbon output with initiatives such as assessing air quality reports and initiating projects to target specific problem areas, according

⁵⁷ "Metropolitan and Micropolitan." *The United States Census Bureau*, 22 Jan. 2021; "Ridership Report." *American Public Transportation Association*, 17 Mar. 2021.

⁵⁸ "2021 Compare Cities Health: Atlanta, GA vs Chicago, IL."

to the Lung Association’s State of the Air Report, Atlanta ranks 25th among cities for worst ozone impacts. Because Atlanta is home to the world’s busiest airport, residents can expect to be directly impacted by the projected increase in the number of flights.

II. Identification of Stakeholders

Despite this being a localized policy problem, the Environmental Protection Agency (EPA), the principal federal agency for environmental issues, is an incredibly important stakeholder. The EPA has a longstanding tradition of offering tax subsidies for pollution control and emission taxes, to combat air pollution. Furthermore, the EPA under the Biden Administration has returned to pre-Trump era policies and made clear that cutting emissions and combating global warming is a high priority.

The EPA’s power to impose stricter emission standards gives the agency tremendous discretion within the next four years’ environmental policy. The EPA also offers states multi-purpose grants; Congress has allocated 13 million dollars for grants in the fiscal year of 2020.⁵⁹ Grant funding from the EPA could have a considerable impact on both the feasibility and public opinion surrounding solutions implemented in Georgia and Atlanta. Despite Georgia’s recent “blue swing,” the state is politically divided, and helping ease the opposition on spending matters is always beneficial.

The petroleum industry and oil lobby have considerable influence on this policy problem. As previously stated, a considerable amount of the metro-Atlanta area’s pollution problem stems from oil and exhaust pollution; and given the money, power, and status associated with it, the oil industry is a primary stakeholder. The United States Energy Information Administration’s 2018 transportation sector energy consumption estimates ranked Georgia ninth for total transportation consumption. This report also found that gasoline accounts for 54 percent of transportation energy use.⁶⁰ This is staggering, considering that states with similar population sizes such as Illinois’s have much lower ratios. The large pocket the oil industry has in Georgia and other states across the country have prompted a large and expensive oil lobbying effort against environmentally friendly alternatives, such as electric cars.⁶¹

The oil lobbies’ reach in this matter, unfortunately, extends beyond fuel-based

⁵⁹ “Economic Incentives.” *EPA*, Environmental Protection Agency, 17 Feb. 2021.

⁶⁰ “Table C8. Transportation Sector Energy Consumption Estimates, 2018.” U.S. Energy Information Administration.

⁶¹ Smith, Grant. “Big Oil Schemes To Crush the Electric Car Market.” *Environmental Working Group*, 23 September 2019.

alternatives. In 2018, *The New York Times* reported several instances of cities attempting to pass a new transit plan. Nashville's plan was to cost the city upwards of \$5 billion. The plan was set in motion and expected to occur until the Koch brothers of Koch Industries, a large energy company, began their lobby. This effort was able to sway political opinion, crushing the transit plans and the emissions benefits it would bring.⁶² Similar events have happened before in cities like Little Rock, Arkansas, and Phoenix, Arizona. Combating these powerful and well-organized groups of lobbyists will take strong, concentrated community-powered efforts by environmental groups such as the NRDC, The Southern Environmental League, and many others.

The auto-manufacturing and sales industry also has a strong stake in this discussion: if Atlanta transitions into a more public transportation-dependent city that is more walkable and bikeable, then demand for cars could decline. Nationally, over nine million jobs are associated with the auto industry, and this statistic stays proportional in Georgia through thousands of engineers, salesman, repairmen, and other industry-related jobs.⁶³ Given that auto-workers are such a large and diverse group, they could easily be mobilized out of pure fiscal interest. However, it should be noted that some figures show that car sales remain consistent even as public transportation usage increases, presumably because people still aim to have a personal vehicle.

III. Solutions: Analysis of Policy Options

A. Expand Public Transportation

A potential solution would be to expand MARTA and public transportation systems throughout the metro-Atlanta area, perhaps by extending a MARTA railway from the northeast corner of the city's perimeter to the downtown area. If public transportation is more accessible, people will be motivated to drive less. Atlanta's notorious traffic is miserable to sit through, so a quicker transportation option that better connects these areas would be attractive to many. Public transportation is proven to overall release less exhaust and be much better for the environment. By extending cheap transportation and providing more availability to ride MARTA, air quality will improve. One particular model for this plan is the commuter rail in Denver, Colorado, which stretches across the city from their downtown airport. This project proved to improve air quality in the city's metro area so significantly that it has been approved for further extension.

⁶² Tabuchi, Hiroko. "How the Koch Brothers Are Killing Public Transit Projects Around the Country." *The New York Times*, The New York Times, 19 June 2018.

⁶³ Crenshaw, Jenni, and Adam Herndon. "How Georgia Is Driving the Auto Industry."

A negative aspect of a project this ambitious is that there are many obstacles ahead and the project would not be finished for years. This project would cost roughly 25 million dollars. 14 million of these dollars would be spent on labor and construction costs. This estimate is based on the cost of the land, materials, and construction labor. Two and a half million dollars would go towards buying five new cars for the line. The rest of the funds would be used to staff new MARTA employees, and a small amount would be set aside for discretionary use so the project is finished in a timely manner. This is a large amount of money to be approved by the appropriations committee. Since this would take years to pass through the legislature and construct, it would be difficult to maintain continued support from the community. With these associated negatives, this solution may not be the best choice.

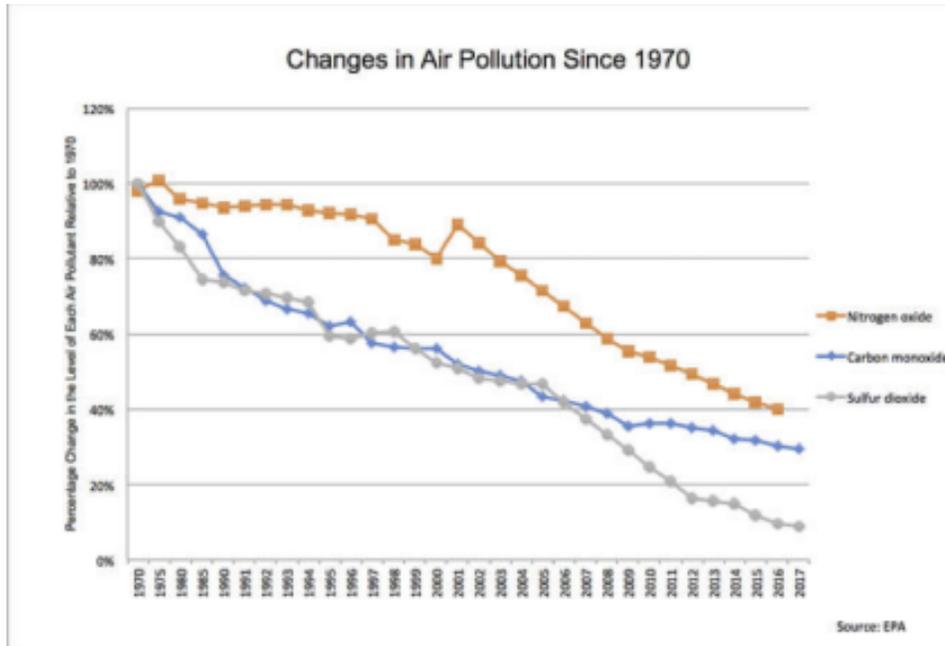
B. Subsidize Carpooling and Electric Cars

Another promising solution is to subsidize carpooling throughout the metro area. This solution is a very low-cost option that will motivate Georgians to carpool to work, school, and social events. This plan would require cars to regularly register their carpooling status with the Georgia State Department of Transportation through an online form. As an added incentive, those who register would receive a carpool pass to be used in the Peach Pass lane and express lanes. Along with that, registrants would receive a yearly 150 dollar tax write-off. This plan would relieve traffic and air quality improvement. This plan is very straightforward and accessible for all.

This would require legislation to be passed, which could prove difficult, especially since this plan will not produce immediate improvements in the condition of soot and smog due to exhaust levels remaining high. This plan may also be easily abused, costing the state more than is gained. By using the added benefit of access to special lanes to incentivize carpooling, the Peach Pass and Express Lane Programs could be distressed. This could hurt community support as well as the level of equities to the community. Overall this plan is not the most effective way to address the problem at hand.

C. Enact Stricter Emissions Standards

Stricter emission standards inside the perimeter of Atlanta would reduce exhaust drastically, thus, improving air conditions. Exhaust standards dramatically improved air quality with the passage of the Federal Clean Air Acts in 1970, 1977, and 1990, as shown in the graph below.



Atlanta is a major traffic hub and has been for decades, being the meeting point of three national interstates: I-20, I-75, and I-85. This has resulted in the streets and interstates of the city being busy at all hours. Stricter emissions standards will help reduce carbon dioxide output from cars and even planes. This plan is the most effective and drastic effort for air quality in the short run, but it will improve air quality tremendously in the long run as well. This plan is cheap for taxpayers, as it only requires a change in legislation.

However, changing legislation can prove difficult, especially when a policy is so divisive across party lines. A bill making emission laws and regulations stricter would be a very controversial move, especially without community support. The plan would ultimately reduce traffic flow and could hurt business and commerce in the area. There are also ties between the energy lobby and the Republican Party, so this plan could face serious opposition and die out. Despite the great promise this plan brings, it is not very attainable in the grand scheme of things.

D. Invest in Vertical Forests

A fourth potential solution is to invest in growing vertical forests around the city. These biological murals would essentially cover buildings, bridges, sidewalks, and rooftops around the city, and new developments would be designed to accommodate plants. Growing vertical forests and adding more greenery throughout the city would allow the plants to absorb the carbon and improve air quality. This theory is based on a popular air pollution solution in Asia, especially China, and has proven to be very effective. The

Nanjing Vertical Forest in the Jiangsu province of China has been estimated to absorb 25 tons of carbon dioxide each year, and to release enough oxygen to make the air 3,000 times healthier than it is currently.⁶⁴

This plan would cost around four million dollars. This money would allocate two million dollars toward infrastructure and greenery costs and then two million dollars towards implementation. Another possible way to implement this solution would be to offer tax breaks or subsidies for companies and businesses to add greenery around and on their buildings. This solution could face community opposition due to cosmetic features, but because this solution is relatively new in the U.S., public opinion is still unknown. The largest problem with this idea is how untested it is, specifically in the U.S. Though adding greenery throughout a city is typical, this “green tower” is a relatively new innovation.

E. Improve MARTA’s Bus Systems by Implementing Hybrid Buses and Bus-/Bike-Only Lanes

Finally, the fifth potential solution would improve MARTA’s bus system by purchasing ten new hybrid buses for the city of Atlanta. These hybrid buses, though more costly than standard buses, would cut emissions significantly with their reduced exhaust level; they will additionally help improve air quality by providing more opportunities to take the bus over driving. This plan also includes building new bike- and bus-only lanes throughout Atlanta’s major roads. A shared bike- and bus-only lane will make bus routes more efficient and rides quicker. This plan will again incentivize citizens to take the bus over walking. Having a separate bike-only lane will also motivate citizens to ride their bikes, because of the increase in safety and efficiency. Los Angeles, California, has spent recent years enacting initiatives like this one to help convert the city into a more car-free environment. Los Angeles’ local officials have found that these investments lead to many positive results regarding construction delays and air quality.

This plan will only require budget appropriations to become a reality. To fully fund this initiative, fifteen million dollars is needed. 5.55 million dollars will be spent towards purchasing ten new hybrid buses, each costing about \$550,000. This investment in new buses will be a gift to the city that will last for years to come and provide a plethora of benefits. The rest of the budget will be spent on constructing ten new miles of lanes for buses and bikes throughout the city. This plan could receive some community backlash due to construction issues, but other than that this plan serves the community well.

⁶⁴ McFadden, Christopher. “15+ Projects That Could End Air Pollution Around the World.”

IV. Recommended Solutions and Strategy

Given the available data and considering all factors, the best way to improve air quality in the metro-Atlanta area would be to secure appropriations to purchase ten new hybrid buses and construct ten miles of bike- and bus-only lanes throughout the busiest parts of the city. Atlanta's current public transportation system is a travesty; new buses and new routes will greatly extend the reach of MARTA. This solution addresses several causes associated with air pollution such as urban sprawl, traffic, lack of public transportation, and high emissions. It motivates people to take public transportation and or ride their bike through the city. It will impact everyone who lives within a thirty-mile radius of the city. Asthma rates and emergency room visits will decrease, as could temperature levels. This plan uses state funds very effectively and helps secure our city's wellbeing for the next generation. This extension of public transportation and transitioning of Atlanta to a more eco-friendly city is what being a Georgian is about: progress and working towards the goal of making our communities a better place for all.

Appropriations:

In order to execute this plan, I will request a total of \$15,000,000. These initiatives will have future maintenance costs associated, which must then be accounted for in the MARTA budget and the Department of Transportation budget. This budget will be broken up as follows:

| | |
|---|--------------|
| Cost of ten new hybrid buses: | \$5,550,000 |
| Cost of ten new miles of shared bike-/bus-only lanes: | \$9,450,000 |
| Total costs: | \$15,000,000 |

There are two possible ways for receiving this necessary funding. Plan A secures the initiative's inclusion in Governor Kemp's initial budget proposal for the Department of Transportation. The best way to motivate Governor Kemp to seriously consider including the initiative is by stressing the benefits of a more bipartisan bill. Because environmental policy is exclusively on the agenda of the state's Democratic party, Governor Kemp could gain significant political capital with Georgia Democrats.

Plan A is quite unlikely to succeed given Governor Kemp's political record and known conservative values. Moreover, Governor Kemp is supported by many of the companies and groups that would oppose this initiative. If Plan A fails, Plan B will have the funding written into the Legislative Budget Bill. Having a powerful team of supporters in the Georgia Senate and House of Representatives is crucial to help gain support and awareness of the issue. The budgetary bill would start out in the House Appropriations Committee, pass to the floor of the House, then on to the Senate Appropriations Committee, and finally to the floor of the Senate for a final vote, before requiring Governor Kemp to sign the budget into law. The most instrumental person in getting this bill passed is Senator Gail Davenport, a Democrat from Georgia's 44th district. Senator Davenport would be a good champion for this initiative for a variety of reasons. Senator Davenport is part of both the Urban Affairs Committee and the Natural Resources and the Environment Committee. Both of these committees are instrumental in implementing the initiative, as they pertain to public transportation, the metro area, and overall environmental concern. Being a Democrat and a former delegate to the Democratic National Convention also will motivate her to take on a strong environmental initiative as it is a big item on the party's agenda. Along with this, Gail Davenport is a noted children's rights advocate, who has lived in the metro area for the majority of her life. She will see the merit of improved air quality upon health, specifically in childhood asthma and lung disease. Other important legislators include Representative Pat Gardner (D-57), Representative Mable "Able" Thomas (D-56), and Senator Jenifer Jordan (D-6). All of these legislators are Democrats in Atlanta serving on committees that demonstrate interest in environmental concern and or transportation. Other outside supporters include the Southern Environmental Law Center, the Sierra Club, Georgia Coalition for the People's Agenda, and the Southern Organizing Committee for Economic and Social Justice, and Environmental Defense. As prominent and respected voices of the community, all of these groups are instrumental in expressing the importance of this issue and securing the initiative's funds.

V. Conclusion

Atlanta's air pollution problem is not going away. The health and beauty of our city will deteriorate if action is not taken. The causes of this problem are clear and must all be addressed. Air pollution affects every single person in the metro area, but is especially harmful to Atlanta's children and elderly. Atlanta has paved the South's way forward for over a hundred years and must continue doing so to secure a prosperous, green future. By

expanding and improving Atlanta’s public transportation system with ten new hybrid buses, and motivating residents to use the more efficient system, the air quality in Atlanta will improve exponentially. This is not only an investment in clean air, but an investment in the future advancement of Atlanta’s infrastructure. This initiative will improve air quality and the lives of every Georgian in the metro-Atlanta area.

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Perspective Paper

*How Big Business Won the Class War:
Domestic Affairs, Foreign Policy, and International Solidarity*

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Abstract:

This paper argues that the United States' progressive movement must tie domestic issues to foreign policy through solidarity with workers around the world. International working conditions and pay have an adverse impact on American working conditions. In response to the growing discontent with the status quo felt by many Americans, I pose the question "how do we respond?" and provide an internationalist mindset as an avenue forward. As a case study, this paper examines Guatemala's history with U.S. military aggression and connects it to the decline of the U.S. working class.

Calls for reform of the American political system are growing. America's privatized health care system is woefully inadequate despite the astronomical costs, and workers' wages have stagnated while corporations rake in profits. This combination of crises has resulted in a populace that is extremely dissatisfied with both major political parties. Americans have expressed their discontent through astonishingly lower voter turnout; a recent Gallup poll states that 62 percent of Americans believe a third party is needed.⁶⁵ Many American citizens are justified in their calls for structural change in the face of widening inequality. They argue that they should not need to work 60 hours per week to support their families, and that healthcare should not be tied to employment. There have been some feeble attempts to quell this discontent through policy proposals, including cancellation of student debt, voter reform, universal income payments, an increased minimum wage, and changes to the American healthcare system. Proposals such as the Green New Deal and Medicare for All receive widespread support.⁶⁶

In order to empower the working class and pass progressive legislation, Americans must draw a clear connection between domestic concerns and foreign policy. This means rejecting unprovoked acts of aggression against other countries and enacting radical cuts to the military budget. Americans must stand with workers abroad, cultivate an internationalist mindset, and foster greater cooperation with other countries. These principles stand in diametric opposition to current policies, which promote cutthroat competition domestically and abroad. America's military budget ranks first in size, currently spending more than the next ten countries on that list, combined—despite the absence of a serious geopolitical threat.⁶⁷ This 715 billion dollar military budget demands taxpayer funds which could otherwise go towards addressing other needs of working families.

Capitalism is now in its globalized and financialized form. Investment in the means of production has declined in favor of speculation and financial manipulation, leaving debt skyrocketing and the nation riding through endless boom and bust cycles.⁶⁸ Karl Marx's theory of crisis describes these cycles and the tendency for the rate of profit to fall, giving way to decline and crisis.⁶⁹ Less investment in the means of production results in fewer

⁶⁵ Christopher, Ingraham. "Analysis | How to Fix Democracy: Move beyond the Two-Party System, Experts Say." The Washington Post. WP Company, March 2, 2021.

⁶⁶ Kenny, Stanci. "As Centrist House Democrats Attack Medicare for All, Fox News Poll Shows 72 percent of Voters Want 'Government-Run Healthcare Plan'." Common Dreams, November 6, 2020.

⁶⁷ Jason, Lemon. "As Congress Debates Military Budget, U.S. to Spend More than Next 10 Countries Combined." Newsweek. Newsweek, July 22, 2020.

⁶⁸ Robin, Greenwood, and David Scharfstein. "The Growth of Finance." Harvard Business School, 2013.

⁶⁹ Karl, Marx. Essay. In *Das Kapital: A Critique of Political Economy*, Section 3. Pacific Publishing Studio, 2010.

well-paying jobs and a concentration of wealth among the high-level managerial class.⁷⁰ This is felt through growing underemployment, growth of the gig economy, and increasing worker insecurity.⁷¹ Even Alan Greenspan, free market enthusiast and the former Chair of the Federal Reserve in the United States, who had argued that worker insecurity was a positive force, acknowledged the error of his ways after the economic collapse of 2008.⁷² The Great Recession carried out many of Marx's theories. Deregulation and growth of the financial sector, as the result of declining investment in the means of production, sent the world economy into a tailspin. It would have resulted in the collapse of modern society had it not been for trillions of dollars spent bailing out the banks responsible for the crisis.

The globalization of capitalism has allowed corporations to be unrestricted by the same geographic laws as human beings, thanks to free trade agreements such as the North American Free Trade Agreement (NAFTA) and organizations such as the World Trade Organization, the International Monetary Fund, and the World Bank. Corporations are free to pack up their bags and shift production wherever they would like, while workers are effectively stuck within their country's borders and subject to its rules.⁷³ Corporations can thus legally threaten to outsource jobs and move production overseas when unions and workers make demands, in a phenomenon called "capital flight." This has been used to minimize the power of unions and suppress wages. A class war, put on hold from the 1930s through the 1960s, has been resumed by big business, and they are winning.

The threat of capital flight is grave due to the privatization of formerly public resources and deregulation of industries, such as the financial sector, since the 1970s.⁷⁴ There is an effective way to remedy this: cultivating an internationalist mindset to fight for improved working conditions in countries facing the most dramatic exploitation. Large corporations often outsource their labor to countries such as Guatemala, the Philippines, and Indonesia.⁷⁵ These countries have many common characteristics, including extremely repressive governments, poor working conditions, poverty wages, and a history as victims of

⁷⁰ Thier, Hadas. *A People's Guide to Capitalism: An Introduction to Marxist Economics*. Chicago, IL: Haymarket Books, 2020.

⁷¹ Lacurci, Greg. "The Gig Economy Has Ballooned by 6 Million People since 2010. Financial Worries May Follow." CNBC. CNBC, February 4, 2020.

⁷² Clark, Andrew and Jill Treanor. "Greenspan - I Was Wrong about the Economy. Sort Of." *The Guardian*. Guardian News and Media, October 23, 2008.

⁷³ Faux, Jeff. "NAFTA's Impact on U.S. Workers." Economic Policy Institute, December 9, 2013.

⁷⁴ Crandall, Robert. "Extending Deregulation." Brookings Institution. Opportunities 08, 2013.

⁷⁵ Gallimore, Derek. "Philippines: the Top Outsourcing Destination." *Outsource Accelerator*, June 25, 2021.

US intervention.⁷⁶ The term “Banana Republic” could be used to describe any of those three countries. Its meaning is rooted in the Guatemalan history of the United Fruit Company.⁷⁷ Guatemala has had one taste of democracy in the last 100 years, when Jacobo Arbenz and his reformist government was elected into power in 1951.⁷⁸ At the time, much of Guatemala was essentially controlled by foreign corporations, including the United Fruit Company, who owned a staggering 42 percent of the country’s arable land.⁷⁹ Arbenz was driven by the reasonable idea that the people of Guatemala should be the ones to benefit from their country’s resources. This belief led Arbenz to implement Decree 900, otherwise known as the Agrarian Reform Law, which redistributed presently unused land to local peasants.⁸⁰ 225,000 acres were redistributed from the United Fruit Company to local peasants. The company was compensated with \$624,572 in bonds—the exact amount of money it had claimed the land was worth on its tax forms.⁸¹ Despite being heralded as one of the most successful land reforms in history, as it turned unproductive land into productive land and empowered Guatemala’s poorest citizens, the United States government was not pleased.

After the passing of Decree 900 on June 17, 1952, the United States government facilitated a coup d’état in 1954 to overthrow the democratically elected Arbenz and impose a military dictatorship. Next came a decades-long campaign of terror, where the Guatemalan government—funded by the United States—deployed paramilitary death squads to slaughter thousands of their own citizens every year. A 1976 report from Amnesty International estimates that, between October 1966 and March 1968, up to 8,000 peasants were killed only in Zacapa, a small department in Guatemala with a current population of only 245,000.⁸² These death squads received support during both Democratic and Republican administrations, including those of Jimmy Carter and Ronald Reagan.

For many Americans, it is hard to believe that the government facilitated this ruthless savagery, but the Guatemalan regimes that followed Arbenz allowed penetration of foreign capital and fostered the ideal business conditions for the United Fruit Company to reclaim

⁷⁶ “How America Overthrew Guatemala's Reformist President.” BBC News. BBC, June 19, 2019.

⁷⁷ Kurtz-Phelan, Daniel. “Big Fruit.” The New York Times. The New York Times, March 2, 2008.

⁷⁸ Gershman, John and Arnold Oliver. “Guatemala and the Forgotten Anniversary.” Institute for Policy Studies, May 8, 2014.

⁷⁹ *Id.*

⁸⁰ Trefzger, Douglas W. “Guatemala’s 1952 Agrarian Reform Law: A Critical Reassessment.” *International Social Science Review* 77, no. 1/2 (2002): 32-46.

⁸¹ “Background on the Guatemalan Coup of 1954.” UMBC Center for History Education.

⁸² Amnesty International (1976). *Amnesty International Annual Report 1975–1976*. London, UK: Amnesty International Publications.

their land. The American government traded freedom of the human spirit and thousands of innocent lives for the freedom of U.S. capital.

The horrors experienced by Guatemala might seem disconnected from the domestic affairs of the United States, but a closer look proves otherwise. To ensure this coup d'état was carried out, the United Fruit Company waged a propaganda campaign targeting both the U.S. population and its government. They commissioned a report from a firm known to be hostile to social reform, and presented it to members of Congress.⁸³ They also hired Edward Bernays, known as “the father of public relations,” to paint them as victims of international communism and discredit the elected Guatemalan government. These two propaganda reflect historical commercial patterns: corporations exercising significant influence over the U.S. government, and anti-communist propaganda being used to turn public opinion against elected governments.

The overthrow of Arbenz occurred during Joseph McCarthy's tenure as a Senator of Wisconsin. This period was characterized by the “red scare,” a deep fear of communism weaponized into intolerance and intense repression of union activism and organizing.⁸⁴ It eventually led to a departure from the progressive politics of President Franklin Roosevelt and New Deal Democrats.

This internal attack on communism caused a significant rift within organized labor. At the time, a united front of union members, socialists, and communists had spearheaded the formation of a dynamic working class, which served as the mass base behind the New Deal reforms. The red scare rhetoric used to turn the U.S. against Guatemala also ripped this powerful working-class coalition to shreds. As repression of communist activity commenced, resulting in aggressive police questioning and imprisonment of labor activists, union members and socialists included. Many left-wing union activists were fired from their jobs by management; many distanced themselves from communists, resulting in a weakening and de-radicalization of unions.⁸⁵ The solidarity between these three parties was broken, allowing for successful state repression to push back organizing gains, including the right to strike which was forfeited over time. This also transferred power from left-leaning unions like the United Auto Workers, and the infamous International Workers of the

⁸³ Schlesinger, Stephen and Stephen Kinzer. Essay. In *Bitter Fruit: the Story of the American Coup in Guatemala*, 90–97. Cambridge (Massachusetts): Harvard University, David Rockefeller Center for Latin American Studies, 2005.

⁸⁴ Schrecker, Ellen. "McCarthyism: Political Repression and the Fear of Communism." *Social Research* 71, no. 4 (2004): 1041–086.

⁸⁵ Pryzbylski, David J. “Unions by the Numbers: 2021 Edition.” *The National Law Review*, January 28, 2021.

World, to exclusionary and anti-communist unions such as the American Federation of Labor.⁸⁶

That moment—when anti-communism broke the solidarity between socialists, communists, and union members—was the moment big business won the class war. To restore working class power in America, unbreakable solidarity is needed with the downtrodden workers of the world. Americans need to see the humanity in those slaving away for a dollar a day in Indonesian sweatshops, as they should have in the landless peasants of Guatemala. Their livelihoods are directly tied to those of the U.S. working class: corporations, driven solely by the need to generate profit, will continue to move operations to poorer countries without fair labor laws, and American workers will continue to fall further behind. To prevent this from happening, Americans must fight for people who are otherwise strangers, and we must demand humane working conditions in all corners of the world.

Free trade deals such as NAFTA have allowed for the penetration of foreign capital into new territories, thanks to America's unparalleled leverage as the premier economic superpower.⁸⁷ Instead of using this leverage to allow U.S. corporations to prey on exploited workers, we should insist that U.S. trading partners improve pay and working conditions. It can happen, but only if it is demanded, as was the Civil Rights Movement and an end to the Vietnam War. Americans must dig deep and fight for the rights of all international workers. This radical solidarity will return leverage to the American working class. If corporations cannot threaten workers with exile and capital flight, American workers will be able to stand up for themselves and demand better pay, benefits, and universal healthcare. Just as unions had no answer to the neoliberal attack on labor, corporate America will have no answer to the awakening of the global working class.

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⁸⁶ Davis, Mike. *Prisoners of the American Dream: Politics and Economy in the History of the US Working Class*. London: Verso Books, 2018.

⁸⁷ NAFTA and Foreign Investment.” Economic Policy Institute, September 7, 2000.

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