Baby Bonds: Saving for Americas Future

An Economic Analysis of the American Opportunity Accounts Act

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ABSTRACT

Child Development Accounts are government-established and maintained savings accounts for children born to qualifying, generally low-income, families. Often seeded with a cash grant from the government, the savings account can be accessed when the child turns 18 for specific purposes such as financing education, buying a house, or opening a business. While Child Development Account policies have been implemented by some local and state governments, the American Opportunity Accounts Act (AOAA) proposes to establish a Child Development Account for all American children at birth. The sponsors of the AOAA believe that the legislation will reduce income inequality and reduce the racial wealth gap in the United States. An economic analysis of the AOAA predicts that the proposed legislation would incentivize middle-income families to have more children than they otherwise would while also reducing the private saving levels of middle-income families for future child-related expenses. Similar effects are not expected in low- and high-income families. Finally, the results of the analysis demonstrate that if policymakers wish to achieve the maximum possible reduction in the income and racial wealth gap, then AOAA benefits should be limited solely to low-income families.

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EXECUTIVE SUMMARY

Child Development Account policies have started to gain popularity among state and county governments as a possible means to reduce the income gap between America's wealthiest and poorest families. Under these policies, the government provides savings accounts to children born to low-income families as well as a cash grant to seed the account. The government often makes additional annual deposits into the savings account, and, at age 18, the child can access the savings for specific purposes such as financing education, buying a house, or opening a business.

Recognizing that a lack of substantial savings often prevents low-income individuals from participating in wealth-building activities, federal lawmakers are attempting to introduce legislation that will mimic such programs already in place in Washington, DC, Connecticut, and California. Under the recently introduced American Opportunity Accounts Act (AOAA), congressional members are proposing that all American children receive $1,000 at birth and an additional annual payment based on family income every year until the child turns 18. These funds would be maintained in a Treasury Department account until the child's 18 th birthday, at which time they could use the funds for authorized purposes such as attending college or purchasing a home. AOAA sponsors believe that the act can reduce income and racial wealth inequality in the United States. As the legislation is written, America's poorest children could receive a benefit worth over $46,000 at age 18.

The aim of this policy brief is to inform citizens and policymakers about the potential impacts of the AOAA. After discussing the economic theory and history behind proposals like the AOAA, the analysis uses economic models to forecast the impact of the AOAA on American families. The findings and policy recommendations from that analysis are as follows:

Findings

1. The AOAA is likely to incentivize middle-income families to have more children than they otherwise would, increasing American fertility rates.

2. The AOAA is likely to reduce the private saving levels of middle-income families for future child-related expenses such as education.

3. The AOAA is likely to reduce the income and racial wealth gap in the US.

Policy Recommendations

1. The AOAA is likely to incentivize some American families to have more children than they otherwise would. If policymakers seek to combat the declining fertility rate in the United States, policymakers should provide benefits for middle-income families at values equal to or greater than those currently proposed under the AOAA.

2. If policymakers wish to avoid the reduction in the private saving levels of middle-income families for future child-related expenses, policymakers should limit AOAA

beneficiaries to low-income families or reduce proposed benefits to middle-income families while offering to match middle-income families' savings up to a predetermined amount.

3. If policymakers wish to achieve the maximum possible reduction in the income and racial wealth gap, policymakers should limit AOAA beneficiaries solely to low-income families.

INTRODUCTION

In February of 2023, Congresswoman Ayanna Pressley (D-MA-7) and Senator Cory Booker (D-NJ) re-introduced the American Opportunity Accounts Act (AOAA). First introduced in 2018 — and introduced in every Congress since — the so-called "baby-bonds" act would provide every American child with $1,000 at birth. The funds would be placed in a federally insured account maintained by the Treasury Department, achieving an estimated 3 percent interest rate annually. Additionally, each child with an American Opportunity Account would receive a supplemental deposit of up to $2,000, dependent on family income, annually until their 18th birthday. At age 18, the child could withdraw funds from the account for specific wealth-building activities. Such activities include financing higher education, buying a home, starting a business, or saving for retirement.

A primary goal of the AOAA is to reduce income inequality across the United States by providing seed capital through which Americans could start investing in their personal economic growth and security. According to Senator Booker, many families are prevented from making such investments by "our upside-down tax code, which is great at preserving and building wealth for corporations and wealthy families but fails Americans who are barely getting by and are unable to afford long-term investments to get ahead" (Congressman Cory Booker, 2023). Some economists claim that saving, or the act of giving up current consumption for future consumption, "is an essential component of building wealth" and "is essential for a higher quality of life" (Wolla and Sullivan, 2017). If one of the causes of income inequality is that many Americans cannot afford to save, the AOAA establishes savings that can be invested in future wealth-building activities.

Closely tied to the notion of income inequality is the racial wealth gap. Across the United States, Black and Hispanicfamilies tend to have a fraction of the wealth of white families (Dettling et al., 2017). Though the AOAA supplemental payments would be based purely on family income level and not race, the legislation's sponsors believe the larger annual payments to children from low-income families could be a tool in "breaking the cycles of poverty and trauma that have prevented black and brown folks from thriving in this country" (Congresswoman Ayanna Pressley, 2023). According to policy fellow Shira Markoff of Prosperity Now, "targeting resources toward children from households with the least resources disproportionately benefits children from Black, Latinx and Indigenous households" (Markoff, 2022, 6). Though the AOAA is designed to help low-income children regardless of race, since many low-income families are Black or Hispanic, these non-white families are likely to receive most of the benefits (Dettling et al., 2017). The bill's proponents hope that such a distribution can reduce the racial wealth gap while simultaneously addressing broader income inequality in the United States.

Though the AOAA is not likely to pass at the federal level due to the current congressional makeup, momentum is building behind similar "baby bonds" efforts across the countrySuch proposals have already passed in Washington, DC, Connecticut, and California, and have been introduced in eight additional states (Johnson, 2023). Given the likelihood that more politicians and citizens will be asked to consider the merits of AOAA-type policy proposals, this policy brief will use economic models to analyze the potential impacts of passing the AOAA. First, the brief will describe the economic theory and past research efforts that will inform the economic models used to predict the impacts of the AOAA. Second, the brief will use models

to determine if the AOAA will incentivize American families to have more children. Third, the policy brief will predict the impact of the AOAA on Americans' saving behavior. Fourth, the brief will address whether the AOAA is likely to reduce the income and racial wealth gap. Finally, the results from these examinations will be used to inform recommendations for additional government policies that seek to subsidize saving for future wealth-building investments.

THE ECONOMICS BEHIND BABY-BONDS

ARE CHILDREN NORMAL OR INFERIOR GOODS?

The AOAA legislation, at its core, increases the wealth of beneficiary families. The policy allows a family to purchase more education or future savings for their child than they could afford without the AOAA. Alternatively, a family can replace funds it otherwise would have spent on education or future savings with government funds and instead spend their own money on the consumption of other goods. In order to determine the impact of the AOAA on a family's decision to have children, one must first know how an individual views having children from an economic perspective. More specifically, do families want more or fewer children as their wealth increases?

In economic terms, consumption of a normal good increases with an increase in wealth and decreases with a decrease in wealth. Alternatively, consumption of an inferior good decreases with an increase in wealth and increases with a decrease in wealth. These changes in consumption resulting from wealth changes are known as wealth effects. Though children are not traditional consumer goods, the decision to have a child does involve the trade of a family's resources for the benefit of having a child. The trade of family resources for a perceived benefit allows for the examination of this issue from an economic perspective.

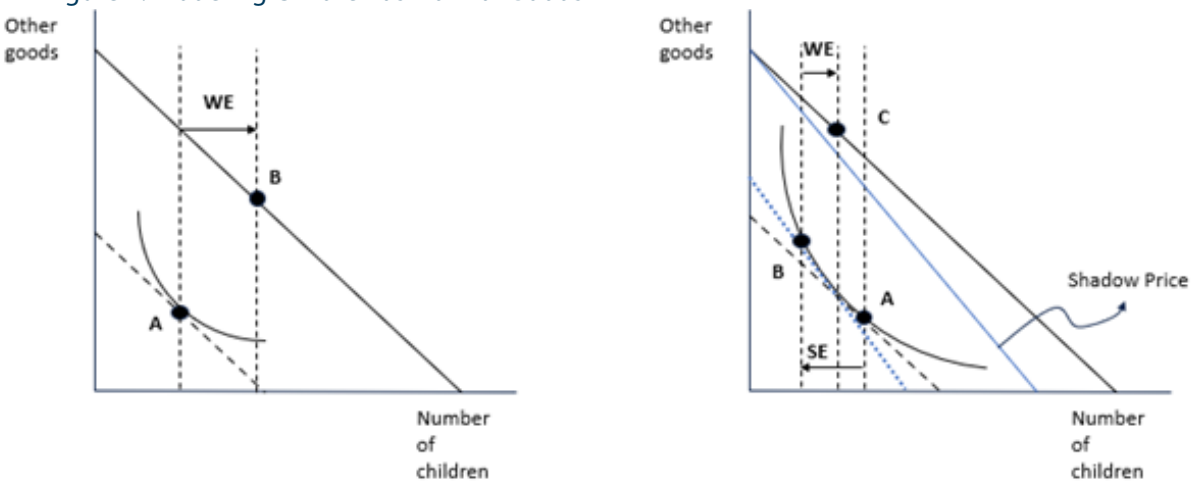
Traditionally, most economists view children as inferior goods, meaning that as an average family's wealth increases, the number of children in that family decreases. Economist Justin Wolfers plots fertility rates against gross-domestic product (GDP) per capita for all countries since 1960 and finds that, nearly universally, as GDP per capita increases, fertility rates decrease (Wolfers, 2011). Wolfers' observation seems to be mirrored in surveys of family preferences. In households with annual incomes over $75,000, two-thirds of families claim to want two or fewer children; that rate drops to about 56 percent for households with annual incomes less than $75,000 (Rampbell, 2011). Wolfers concludes, "[w]hether you cut the data across countries, through time, or across people at a point in time, the same fact arises: the richer you get, the fewer kids you have" (Wolfers, 2011).

Despite being the traditional perspective, the notion that children are inferior goods has never been universally accepted among economists. In 1973, Gary S. Becker and H. Gregg Lewis were among the first to push back, using a model that compared child quantity to child quality. Their premise was that families expend more resources obtaining "quality" for their children (Becker and Lewis, 1973). Though Becker and Lewis do not define "quality," the assumption of "quality" can be represented by greater relative spending on education, activities, and goods for children. While present society may bristle at the notion of higher "quality" children, Becker and Lewis' key point is that for any increase in family income, there is an accompanying "shadow price" for an increased number of children. As a family gets wealthier, that set amount of wealth must now be divided among all children. This leads to diminished "quality" of the child for every additional child. "The key feature in our analysis is that the shadow price of children with respect to their number…is greater the higher their quality is" (Becker and Lewis, 1973, 279). Essentially, a child costs more to a family whose wealth has increased relative to a family whose wealth has not increased.

The revelation from Becker and Lewis is that having another child changes the cost of raising a

child, and anytime the cost of something changes a substitution effect is introduced. When the price of a good changes, consumers will purchase either more or less of that good. If a good's price increases, consumers will substitute away from that good toward less expensive goods. Similarly, if a good's price decreases, consumers will substitute more of that good in place of relatively expensive alternatives. In the case of "high-quality" children, the price increase associated with an additional child means that wealthy families may substitute away from more children. This means that children may be normal goods, and families generally prefer more children as wealth increases, but this positive wealth effect is sometimes masked by a negative substitution effect for higher-income families. See **Figure 1** for a visual depiction of this concept.

Figure 1: Modeling Children as Normal Goods



Source: Figure prepared by the author. In the left-hand panel, economic theory predicts that if children are normal goods, then as family wealth increases from the dashed diagonal line to the solid black diagonal line, the number of children in the family should increase from point A to some number greater than point A; point B for example. The panel on the right incorporates Becker and Lewis's "shadow price" concept, with the price change indicated by the blue diagonal lines. Though it appears that the number of children in a family has decreased from point A to point C as family wealth has increased, this is due to a large negative substitution effect (SE) caused by a large price change in the cost of a child. The wealth effect (WE), from point B to point C in the righthand panel, is still positive, indicating that children are normal goods.

The idea that children are normal goods and that families want more children as family wealth increases is coming to be accepted in a small but growing body of literature. Michael Lovenheim and Kevin Mumford find that using housing wealth as a proxy for income eliminates the negative association between wealth and fertility that often results from analyzing only cross-sectional data. Their study reports a 16 to 18 percent increase in the probability of having another child for every $100,000 increase in housing wealth (Lovenheim and Mumford, 2013). Moshe Hazan and Hosney Zoabi find a similar relationship between female education level and fertility rates. Using education as a proxy for income, they find that women with college degrees or higher have more children than women with some education (Hazan and Zoabi, 2015). They theorize that the relative cost of childcare and housekeeping services decreases for highly educated women, preserving the time cost of those activities, which can then be devoted to more children. In a study of Israeli families, Alma Cohen, Rajeev Dehejia, and Dmitri Romanov find that a $34 reduction in a monthly child subsidy, equivalent to about a 1 percent increase in the cost of an additional child, reduced the probability of mothers with at least two children having another child by .99 percentage points per year (Cohen et al. 2013, 2).

The central premise behind this growing body of literature is that children may be normal goods, but positive wealth effects are often masked by negative substitution effects in societies that have higher average incomes. This effect would likely also be observed in societies in which incomes have continuously been increasing, as is the case in much of the world, even if the income increases have not been equally distributed. These studies seem to indicate that the number of children in a family is more sensitive to substitution effects than wealth effects. For the purposes of this brief and the application of economic principles, children will be considered normal goods.

CAN GOVERNEMENT INCENTIVES IMPACT NATIONAL FERTILITY RATES?

US politicians have expressed concern over the decreasing national fertility rate, down from over two births per woman in the mid-2000s to 1.64 births per woman as of 2020 (Data Commons, 2022). A shrinking population can worsen an already critical worker shortage, and fewer workers means fewer people paying Social Security taxes that support the growing number of retirees. Though sponsors of the AOAA have not specifically claimed the act could increase the United States' fertility rate, other political leaders have proposed similar initiatives to address this problem. While campaigning for the 2024 presidential election, former president Donald Trump declared, "We will support baby bonuses for a new baby boom" (Trump, 2023). Though addressing this issue is not a stated goal of the AOAA, the act's potential impact on fertility is relevant as similar policies may be enacted solely to encourage families to have more children. Additionally, if the AOAA does incentivize having more children, the policy will need to account for an increased number of future beneficiaries.

The US is not alone in experiencing reduced fertility rates. In fact, birth rates are currently below replacement levels in all North American and European countries and many high-income Asian countries (United Nations 2015, 9-10). Unlike the United States, some foreign governments have attempted to incentivize increased birth rates within their countries. Table 1 summarizes these efforts.

Though the magnitude of the effect varies, the results are consistently positive. Apart from some high-income Asian countries, government incentives and subsidies generally increased a country's birth rate. In the case of Israel, the reduction of a government subsidy led to a decreased likelihood of having an additional child for families that already had two children.

Despite the seemingly positive effects of "baby bonus" efforts to increase birth rates in other nations, a notable difference separates the AOAA from the observed policies. Most of the policies involved unrestricted direct cash transfers or monthly subsidies paid directly to parents. In all cases, the parents exclusively controlled all benefits, subsidies, and allowances. Under the AOAA, the cash benefit is not provided directly to the parents but instead maintained in a government-controlled account that cannot be accessed until the child turns 18. At age 18, as the legislation is currently written, the funds technically are eligible for use only by the child, not by the parents. Additionally, whereas cash benefits in other countries were generally unrestricted in their use, the AOAA funds are restricted to financing wealth-building activities specifically identified in the legislation.

Perhaps the closest program to the AOAA initiative was Russia's Maternity Capital Program which provided a one-time 200,000-ruble (US$10,000) payment to families that gave birth to a second-order or higher child. The government restricted these funds to be used only for the child's education, the mother's pension, or to improve the child's current living conditions. Confirming the tyranny of the present, 88 percent of all families chose to use the subsidy almost immediately to purchase improved housing, supposedly improving the

living conditions of the child (Sorvachev and Yakovlev, 2020, 4).

"Baby bonus" efforts in other countries reveal that government policies can influence fertility rates. However, similar expectations in the United States must be tempered by the fact that AOAA benefits would not be paid directly to parents, would not be available in the near term, and would be restricted in their use. These factors may influence economic decision-making by US families in ways that would differ if the benefits were paid directly to parents in an unrestricted fashion.

WHAT IS THE CURRENT STATE OF SAVING IN THE US?

Through the AOAA, the US government seeks to establish a savings account for every American child and to aid in the growth of that savings account through annual contributions, dependent on family income. The premise underlying the government-

Table 1 Summary of Worldwide Government Efforts to Incentivize Increased Birth Rates

Country/Region (if applicable)	Time Period	Financial Incentives	Observed Effect	Study
Canada (Quebec)	1988 – 1997	Direct Cash Transfer - C$500 1st Child - C$1000 2nd Child - C$8000 3rd Child	2.4 percent increase in the number of children; 10.2 percent increase in the probability of having a third child	Malak et al. 2019, 1228
Hong Kong	2013	Tax Allowance - US$15,000 for first through ninth child - Add'l US$15,000 for a child born during the year	No significant change in fertility rate (figures not provided)	Chen et al. 2020, 391
Israel	1999 – 2005	Monthly subsidy varies by year, year of childbirth, and birth order (see Cohen et al., 2013, 3 for a summary)	A US$34 dollar decrease in monthly subsidy decreased the likelihood of having a third or higher birth order child by .99 percentage points for mothers with at least two children	Cohen et al. 2013, 2
Italy (Friuli-Venezia Giulia)	2000 – 2003	Direct Cash Transfer - Euro 3,000 for second child - Euro 4,600 for third child Income threshold policy	2 to 3 percent increase in fertility rate from 2001 – 2004	Boccuzzo et al. 2008, 143
Japan	2010	Monthly subsidy - US$140/month for children aged 0-2 - US$90/month for first and second children aged 3-12; US$140/ month for third and above - US$90/month for children aged 13-15 *See Chen et al., 2020, Table 4, 401	No significant change in fertility rate (figures not provided)	Chen et al. 2020, 391-392
Russia	2007 – 2017	Restricted Cash Transfer of US$10,000; conditional uses	Estimated increase in fertility rates of 7 percent first-born, 12 percent second-born, 15 percent third-born; estimated long-term 20 percent increase in fertility	Sorvachev et al. 2020
Singapore	2005 – 2010	- US$5900 cash transfer for 1st and 2nd child *See Chen et al., 2020, Table 4, 401	8.7 percent decrease in fertility rate	Chen et al. 2020, 390
Spain	2005 – 2009* * Study period; one-time cash payment provided to families in 2007	Direct Cash Transfer US$3900	Estimated 6 percent increase in number of annual births; estimated 6 to 7 percent decrease in incidence of abortions	Gonzalez., 2013, 161-162

established account is that saving is a means to building wealth. Savings can provide the means to invest in financial assets, property ownership, and higher education. These types of investments provide the opportunity for financial returns that exceed the amount of funds initially contributed to the investment.

One reason that policymakers feel initiatives such as the AOAA are necessary is that Americans are not typically great savers. Some can afford to save and choose not to, while others simply have nothing left to save after meeting basic needs. Either way, the average rate of personal savings in the United States has decreased from over 10 percent annually to a rate of just 5.7 percent in 2016 (US Bureau of Labor Statistics, 2020). Relative to the United States in 2016, European Union countries averaged between an 11 and 13 percent annual savings rate (Eurostat, 2016).

Just as income and wealth are not evenly distributed in the United States, those who save and how much they save are unequally dispersed as well. Not surprisingly, research has shown that family savings rates increase with income. Empirical results show that families in the lowest income quintile typically save less than 5 percent of their annual income, while families in the highest income quintile average savings rates between 13 and 46 percent annually (Dynan et al. 2004, 416). Additionally, a $10,000 increase in annual income is associated with a 7percentage point increase in savings rates (Dynan et al. 2004, 417).

One cost that typically requires the use of savings, and a cost specifically targeted by the AOAA, is financing higher education. With the average family paying over $25,000 per year for college, 64 percent of parents report saving, or planning to save, some money to meet college expenses (Sallie Mae and Ipsos 2022, 1;Hanson, 2023). Once again, the distribution of household savings for college is not even. In 2021, of households that saved for college, only 8 percent were low-income (less than $50,000 per year) (Collins et al. 2021, 201). Seventy percent of households that saved for college earned over $100,000 annually (Collins et al. 2021, 201).

The combined research paints a bleak picture of saving in America. Annual savings rates hover around all-time lows, and families that do save are relatively wealthy compared to families that do not save. Similar trends are observed when looking at targeted saving practices, such as saving for education. Again, the majority of families that report saving for college earn relatively high annual incomes, while fewer than 10 percent of low-income families report saving for college. Through the provision of savings capital to primarily low-income families, the AOAA does appear to at least be targeting the appropriate population to address the wealth gap in the US.

WHO NEEDS HELP? WHO GETS HELP?

Sponsors of the AOAA are targeting wealth inequality in the United States. A 2016 Federal Reserve report found that the bottom decile of the US population owned negative 0.5 percent of the wealth in the United States while the top decile owns over 77 percent (Bruenig, 2017). Although a lack of savings for relatively poor families is not the only contributing factor to the wealth gap, the inability of poor families to set aside money in wealth-building vehicles that can generate positive returns is a critical factor. Reducing the wealth gap is important because the negative effects are not constrained to those at the bottom of the gap. First, economists have found that economies with less equitable income distributions have higher fertility differentials between low-wealth and high-wealth families. The tendency for poor parents to have more children with less opportunity to attain higher education lowers a society's average education level (de la Croix and Doepke, 2003). Additionally, economies

with non-equitable income distributions are associated with lower rates of human capital accumulation and economic growth (de la Croix and Doepke, 2003).

Though the wealth gap affects all races and ethnicities within the United States, the effect is especially pernicious among Black families and other non-white families. Congresswoman Pressley's press release notes that "[i]n 2016, the median black family had about $17,000 in wealth compared to the typical white family who had about $170,000" (Congresswoman Ayanna Pressley, 2023). An earlier economic study from 1995 found that the racial wealth gap may have worsened over time, estimating that the average Black household has 17 cents of wealth for every dollar of wealth owned by the average white household (Wolff, 1998, 140).

The impacts of the racial wealth gap are amplified when carried across generations of families. Though wealth transfers from one generation to the next are usually thought of in the context of a family relative passing away, generational wealth transfers happen much more frequently on a smaller scale. Relatives helping to finance education or assisting with the purchase of a house are all generational wealth transfers. As with wealth in general, not everyone has equal access to these micro-wealth transfers. When financing education, 71 percent of Black college students need to take out loans compared to only 56 percent of white students in the 2015 – 2016 school year (National Council of Education Statistics, 2019. At the end of their first year in college, Black students average $1,200 more in student debt - an amount that balloons to $9,500 after the fifth year of college (Fletcher & Fuller, 2021). Similar patterns emerge in home-purchase scenarios. Kerwin Charles and Erik Hurst find that 27 percent of white home-purchasers received family assistance in the form of a down payment, relative to only 7 percent of Black home-purchasers (Charles and Hurst 2002, 295). When Charles and Hurst control for parental wealth, the observed racial wealth gap in down payment assistance is reduced by 25 percent (Charles and Hurst 2002, 292).

While limited access to intrafamilial transfers of wealth is somewhat expected, non-whites encounter constraints on societal tools designed to transfer wealth at a greater rate than whites. For example, loans are the vehicle through which wealth-building investments are often made. Nationwide, the average Black family pays about 1 percentage point more on their home mortgage than the average white family (Chiteji 2010, 356). This means that similar home purchases are more expensive for Black families and that Black families face higher interest costs over the life of the loan. State aid further disproportionately favors white families, with state-sponsored merit scholarships often awarded to white students at ratios greater than their aggregate share of the high-school graduating population and, in one analyzed state, monetary amounts greater than merit scholarships received by minority graduates (Farrell, 2004). These non-need scholarships are "enhancing access for students who would probably attend college anyway" (Farrell 2004, 69). Mortgages and scholarships are supposed to provide greater access to wealth-building opportunities, but in many cases, these tools only serve to widen access for individuals who already have such access.

The wealth gap in America is real, and the impacts of the wealth gap are felt at the individual and societal levels. The wealth gap becomes more pronounced when viewed through a racial perspective, with white Americans owning drastically disproportionate shares of wealth relative to non-whites. These greater shares of wealth enable white families to pass wealth more easily between generations, especially through investment in wealth-building activities such as buying a home and financing education. Additionally, rather than helping low-income, non-white households, societal tools and assistance often instead benefit those already receiving benefits.

SOME BASIC ASSUMPTIONS

In combination with the economic theory and research that informs the potential impact of the AOAA, this brief makes the following assumptions to simplify the development of the economic models:

1. In this brief, the AOAA will only have three income levels into which American families are classed to determine the amount of the annual supplemental payment: low-, middle-, and high-income. In reality, the AOAA classifies Americans into six separate income levels to determine the annual supplemental benefit. The classes selected for the analysis are presented in **Table 2.** An additional related assumption that will ease the modeling process is that families will remain in a designated class until the account comes to maturity. In other words, families remain either low-, middle-, or high-income and will not transition between classes while their child is under 18.

2. Middle-income families save a total of $18,000 of their own money or $1,000 per year per

Table 2 **American Opportunity Accounts Act Estimated Values**

Family Income Class	If annual income is...	...then annual supplemental payment is...	Estimated account balance when the beneficiary is 18
Low	< $25,100	$2,000	$46,215
Middle	< 56,475	$500	$12,815
High	> $125,751	$0	$1,681

Source for AOAA Values: (Congresswoman Ayanna Pressley, 2023)

child for education costs. As of 2018, this figure represents the amount of money an average family saved for college by the time their child began college (Sallie Mae and Ipsos 2018, 2). As demonstrated in the previous section of this analysis, low-income families are unlikely to save, so a corollary assumption will be that low-income families save $0 per year for education (or other future costs). High-income families are assumed to save more than the average family. This analysis will only model education savings for simplicity, but a similar logic can be applied to any of the approved uses of AOAA funds.

3. The average monthly cost of raising a child in the United States is $1,334. This figure is current as of February 2023 (Early Bird Team, 2023).

4. The economic models will only analyze the case of a single child. However, the analysis applies to additional children as all American children are eligible for the AOAA, and all would receive the $1,000 initial payment and annual supplemental payments as qualified, regardless of birth order. This analysis will often refer to the "family" as the unit of analysis, defined as at least one parent and one child. However, this definition is inclusive of all arrangements of adults and children, assuming that the children are eligible for the AOAA.

5. Any future sums of money will be based solely on present-value calculations and will not be discounted. The accruement of interest will also not be accounted for, apart from discussions involving the estimated account balance for a child at age 18. The total benefit already assumes an annual savings interest rate of 3 percent.

POLICY ANALYSIS

WILL THE AOAA RESULT IN MORE AMERICAN BABIES?

The economic research mentioned above suggests that government payments or subsidies related to children can incentivize families to have more children. One difference from efforts in other countries is that the AOAA funds cannot be accessed immediately by a parent. Additionally, the funds technically cannot be spent by the parents (this analysis will ignore the notion that a child could choose to spend the funds in some manner that would benefit the parent). Given that the benefits of the AOAA are not direct and therefore do not immediately benefit a family that must decide whether to have more children, will the AOAA incentivize Americans to have more children?

This question can be answered by viewing the decision to have more children as analogous to consuming more of an economic good. If Americans want more children, then the quantity of children "consumed" is increased. This framing allows for the application of wealth and substitution effects.

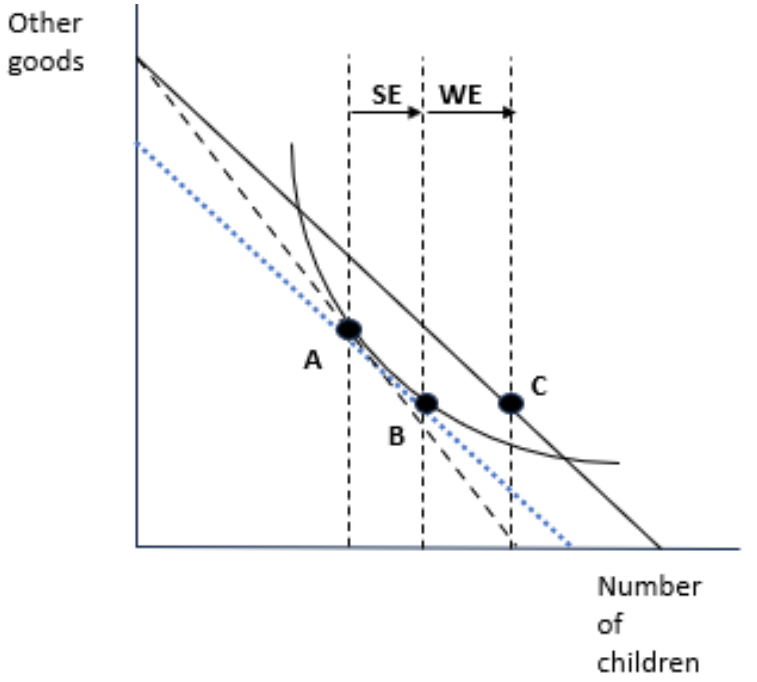
A wealth effect occurs anytime a family's income changes. The first determination that must be made is whether the AOAA changes a family's income. First, assume that every family has an educational savings budget constraint (a sum of money from $0 to some maximum amount that is saved on an annual basis to fund future education). From the assumptions listed earlier, the middle-income family budget constraint is $1,000 per year. Under the AOAA, this middle-income family also receives $500 annually to fund future education. The annual savings budget constraint for the middle-income family has just increased. That family could choose to save up to $1,500 annually for future education. Alternatively, the family could choose to save less of their own money on future education – say $500 – and spend this money on something else. In this way, with the AOAA payment, the family would still be saving $1,000 for future education and would have $500 more to spend on something else (this specific decision will be further examined later in this brief). Regardless of the choice made, the middle-income family feels wealthier under the AOAA, meaning that middle-income families will experience a positive wealth effect. As children are considered normal goods, this implies that middle-income families will "consume" more children — or rather they will choose to have more children.

The wealth effect does not apply in the same manner to low- and high-income families. The low-income families are not saving for future education at all, so their annual savings budget constraint is $0. Though the AOAA provides low-income families with $2,000 annually for future education, the low-income family does not notice this $2,000 as the funds cannot be immediately accessed and spent. The low-income family cannot decrease their spending on future education to purchase other things as was the case with the middle-income family. Even though the low-income family has $2,000 to spend on future education, they do not feel any wealthier and do not experience any wealth effect. Similarly, the high-income family does not experience a wealth effect. Under the AOAA, the high-income family receives $0 annually for future education. The high-income family's annual savings budget constraint remains the same, and the high-income family does not feel wealthier under the AOAA. Though the argument could be made that children from high-income families still receive the initial $1,000 benefit, the total value of this benefit once the child turns 18 is less than 94 additional dollars per year in future education savings; an amount likely too negligible to economically influence the decisions of a high-income family.

Examining the impact of the AOAA on the price of raising a child yields a similar result. As mentioned above, for the purposes of this analysis the average monthly cost of raising a child in the United States is $1,334. For a middle-income family, the cost of saving for future education is built into this monthly cost. The family saves approximately $83 per month ($1000/12 months) for future education that cannot otherwise be spent. The dedicated savings are a "cost" for the middle-income family. Under the AOAA, the middle-income family receives $500 annually for future education or about $42 per month. A middle-income family that is already

saving for future education could choose to substitute the AOAA subsidy for some of their own money being saved. Subtracting $42 a month from $1,334 represents a 3.1percent decrease in

Figure 2: Changing the Cost of Raising a Child for a Middle-Income Family



Source: Figure prepared by the author. Before AOAA, the middle-income family budget is represented by the black dashed diagonal line. At that ime, the family can afford the number of children at point A. AOAA reduces the monthly cost of raising a child, shifting the family's budget to the solid black diagonal line. This shift causes both a substitution effect (SE) toward more children (point A to point B) and a wealth effect (WE) toward more children (point B to point C) for a middle-income family.

the monthly cost of raising a child. Put differently, a middle-income family can "consume" more children with the same amount of income. This results in a positive substitution effect under which middle-income families will substitute toward having more children. This concept is illustrated in **Figure 2.**

An additional insight from **Figure 2** is that one can observe the wealth effect referenced earlier. The middle-income family feels wealthier after the implementation of the AOAA, as indicated by the rightward movement of their budget line. This creates a positive wealth effect in addition to the positive substitution effect.

Before AOAA, the middle-income family budget is represented by the black dashed diagonal line. At that time, the family can afford the number of children at point A. AOAA reduces the monthly cost of raising a child, shifting the family's budget to the solid black diagonal line. This shift causes both a substitution effect (SE) toward more children (point A to point B) and a wealth effect (WE) toward more children (point B to point C) for a middle-income family.

While the substitution effect is positive for middle-income families, this effect is not present for low- and high-income families. As low-income families are not saving for future education and cannot immediately access the AOAA supplemental pay, the AOAA funds do not change the monthly cost of a child for a low-income family. As the cost remains unchanged, a low-income family will not substitute toward or away from more children. The high-income family also does not see a change in the monthly cost of raising a child as the family receives no annual AOAA payment. As the monthly cost of raising a child is the same, the high-income family will

not experience a substitution effect toward or away from more children.

Economic theory predicts that the AOAA will incentivize middle-income families to have more children due to positive wealth and substitution effects. Even though the AOAA is expected to have a neutral impact on low- and high-income families' fertility rates, the net result is still a likely increase in the number of American children born relative to the number born without such a policy.

This finding is generally consistent with Becker and Lewis's concept of child quantity versus child quality. For example, assume that child quality is associated solely with future education, such that a child's number of years of education equals child quality. Every additional year of education would increase a child's quality. For the low-income family, the AOAA provides a total benefit of almost $46,000. This drastically reduces the cost of child quality such that the low-income family can increase child quantity and pay very little to increase child quality. However, this effect is likely minimized among low-income families as the daily cost for all things besides education is still relatively high for each additional child. As high-income families receive almost no AOAA benefit ($1,681 over 18 years), the cost to improve child quality for each additional child remains high. Therefore, the AOAA has a negligible impact on child quality versus child quantity decisions for high-income families as well. The effect is once again positive only for the middle-income family. The total AOAA benefit of over $12,000 represents a substantial investment in child quality that a middle-income family might not otherwise be able to afford. Yet a middle-income family is in a better position to afford the daily costs of raising a child that might be prohibitive to a low-income family. In this manner, middle-income families are more likely to take advantage of the opportunity to increase child quality relative to low- and high-income families and therefore they are likelier to have more children under the AOAA.

Will the AOAA Impact Family Saving Habits?

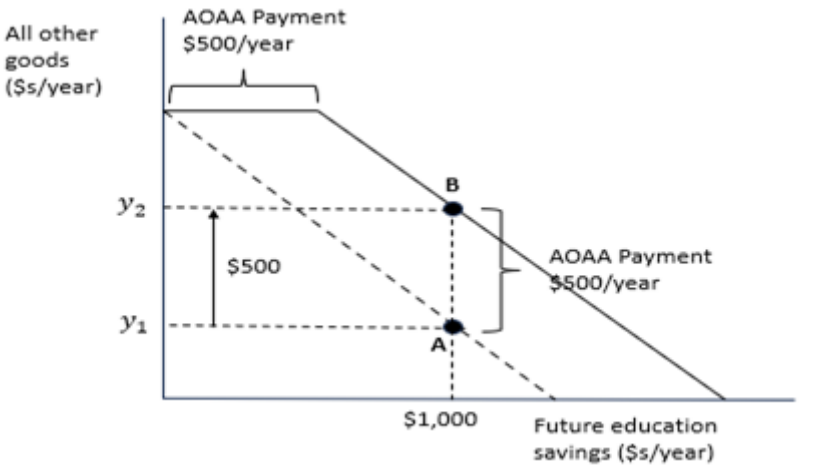
Specifically, this brief is interested in whether the AOAA will encourage or discourage saving among AOAA beneficiary families. As the AOAA is predicted to have the most significant effect on middle-income families' decision to have more children, the discussion of how the AOAA will impact saving habits must begin with middle-income families.

Assume that a middle-income family saves money for "future education" every year. Every year, this family saves a specific amount of money dedicated to future education for their child to be used at age 18. For this analysis, that family is assumed to save $1,000 a year for future education (the amount of money saved for college by the average family). The AOAA supplements this savings budget with a $500 yearly deposit that also goes toward future education. As alluded to earlier, after the AOAA is implemented, some middle-income families may choose to continue saving $1,000 per year of their own money. This results in $1,500 of future education savings at the end of the year. However, the middle-income family does not have to continue saving $1,000 of their own money. Some middle-income families may decide that $1,000 total is all they want to save for future education. These middle-income families may only save $500 of their own money, count the $500 AOAA supplemental deposit as money saved for future education, and then have $500 left of their own money to spend on something else. In this case, the middle-income family still receives the same amount of future education but is paying $500 less. Essentially, the middle-income family has converted the AOAA's annual payment that was restricted to certain purchases (education, house, business) for their child, into an unrestricted cash grant that can be spent immediately. This decision is illustrated in **Figure 3.**

The key finding illustrated in **Figure 3** is that, in the best case for maximizing savings under the AOAA, a middle-income family will choose to continue saving the same amount of their own money for future education as before the AOAA policy began. However, another likely scenario is that many middle-income families will reduce the amount of money they save for future education and instead consume other goods that they could not afford before the AOAA.

The AOAA provides no financial motive for a middle-income family to increase its annual saving for future education. The model predicts that, in terms of future saving, the best that can be expected is that future saving will remain the same, but a more likely outcome is that

Figure 3: Anual Future Education Saving for Middle-Income Family



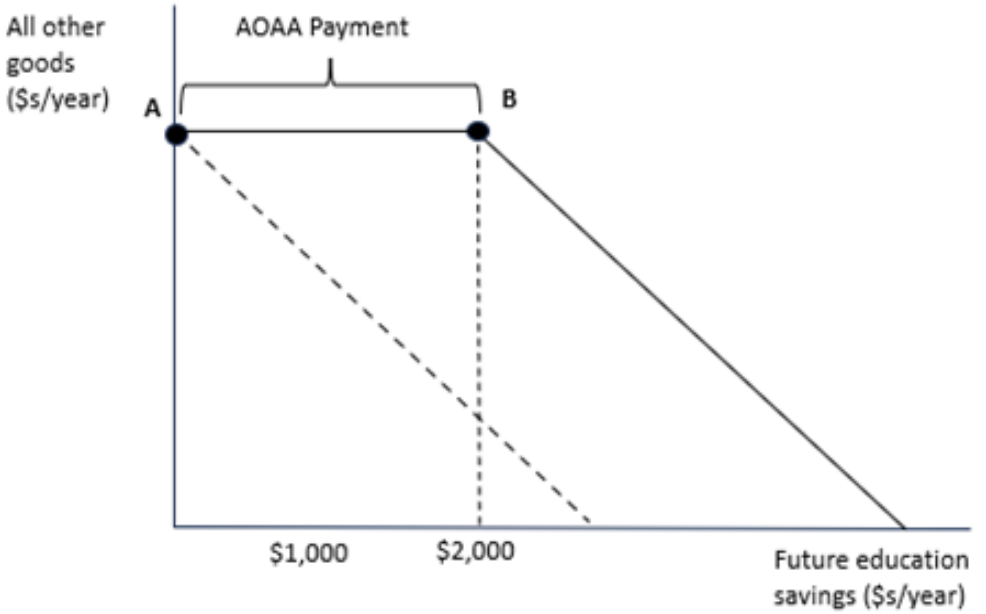
Source: Figure prepared by the author. Before AOAA, the middle-income family budget is represented by the dashed diagonal line. At that time, the middle-income family saves $1,000 per year of their own money for future education at point A and can consume Y_1 of all other goods. After AOAA, the family budget constraint moves to the solid line. At that time, the family can still achieve $1,000 of future education savings, but they can also afford $500 more of all other goods (Y_1 to Y_2) that they could not afford before AOAA.

future private saving will decrease for a middle-income family.

The AOAA will similarly not incentivize the low-income family to increase saving for future education. As the low-income family is saving $0 annually for future education, the low-income family cannot subtract the annual AOAA payment from its annual saving cost as the middle-income family does. This means that the low-income family also cannot convert the AOAA supplemental payment into an unrestricted cash grant as did the middle-income family. While the AOAA provides the low-income family with $2,000 per year of future education, the low-income family cannot possibly save any less and is not likely to save any more. This situation is illustrated in **Figure 4.** The model predicts that the AOAA will not impact the saving behavior of the low-income family.

Before AOAA, the middle-income family budget is represented by the dashed diagonal line. At that time, the middle-income family saves $1,000 per year of their own money for future

Figure 4: Anual Future Education Saving for Low-Income Family



Source: Figure prepared by the author. Before AOAA, the low-income family was not saving any personal money for future education as the family's entire budget is spent on all other goods (point A). After AOAA, the low-income family is still not saving any personal money, but the AOAA funds equate to $2,000 in annual savings for future education (point B). Unlike the middle-income family, the low-income family cannot afford to purchase additional good after the AOAA payment.

education at point A and can consume Y1 of all other goods. After AOAA, the family budget constraint moves to the solid line. At that time, the family can still achieve $1,000 of future education savings, but they can also afford $500 more of all other goods (Y1 to Y2) that they could not afford before AOAA.

Before AOAA, the low-income family was not saving any personal money for future education as the family's entire budget is spent on all other goods (point A). After AOAA, the low-income family is still not saving any personal money, but the AOAA funds equate to $2,000 in annual savings for future education (point B). Unlike the middle-income family, the low-income family cannot afford to purchase additional goods after the AOAA payment.

As previously discovered, the AOAA benefits are too negligible to influence high-income families. This also includes their saving behavior. The AOAA would provide high-income families with $0 per year and a total 18-year benefit of just over $1,600. A high-income family is not likely to change its saving behavior due to AOAA.

A final consideration of the AOAA's potential impact on saving behavior is the notion of crowding-out. Crowding-out generally refers to the idea that when "the government… contributes to a public good that also relies on private contributions…private contributions will decline as government contributions increase" (Nechyba 2017, 663). While economists usually reference crowding-out in relation to public goods, the concept applies to other programs as well, such as the Social Security program. Many economists posit that Social Security disincentivizes saving for retirement because individuals know they will get a monthly payment from the government when they retire. As the Congressional Budget Office (CBO) stated, "[p]eople who expect to receive Social Security may choose to save less for their

retirement…Social Security may substitute for retirement saving" (Congressional Budget Office 1998, vii). The CBO report found that every dollar of Social Security "wealth" reduced the value of an individual's accumulated private wealth upon retirement up to a maximum of 50 cents, although this amount did vary (Congressional Budget Office 1998, 30). In essence, Social Security benefits "crowd-out" private retirement savings and likely reduce the amount of money individuals save. A similar effect is likely to occur under the AOAA, with the AOAA "crowding-out" private future education saving for American families. This effect is likely to be even more pronounced than Social Security crowding-out, as individuals must pay Social Security taxes to receive retirement benefits. Some individuals may reason that the tax payment is a form of saving since that current investment will result in some form of future retirement benefit. In terms of the AOAA, no such justification is possible as the benefit is provided with no tax investment required. The crowding-out phenomenon serves as further reason that family saving toward education and other AOAA-approved purposes is likely to be reduced under the act.

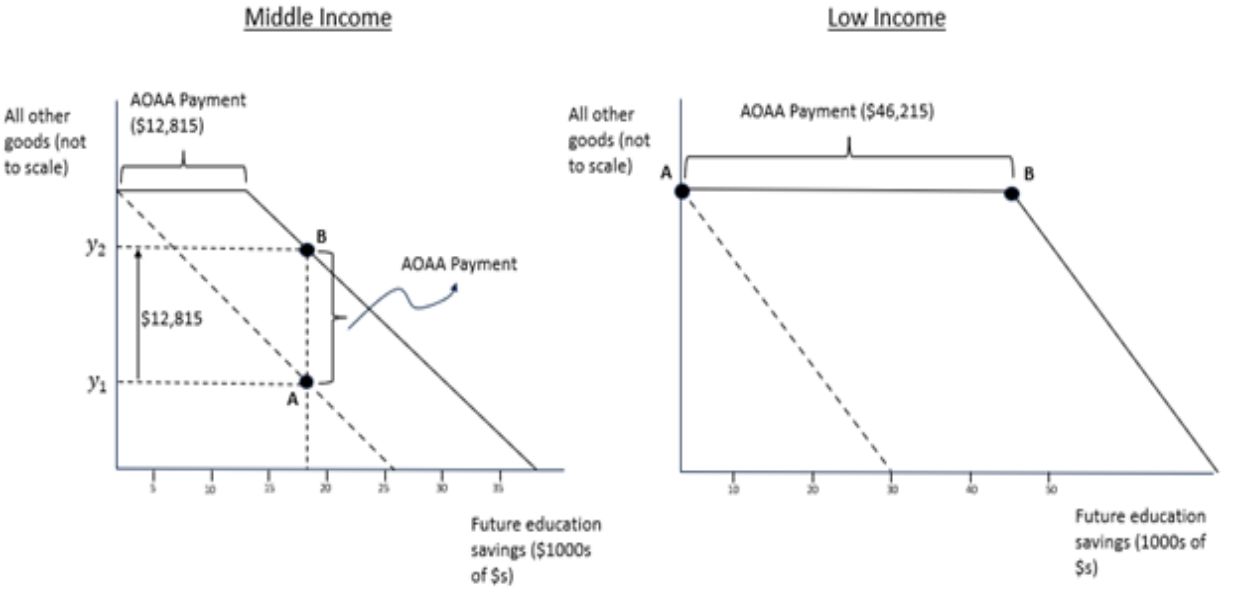
CAN THE AOAA REDUCE THE INCOME AND RACIAL WEALTH GAP?

Simply looking at the redistributive characteristics of the total benefits to American children under the AOAA seems to provide compelling evidence that the policy would reduce the income and racial wealth gap. The total benefit provided to a child from a low-income family is 27.5 times more money than the benefit a child from a high-income family would receive. A $46,000 savings account at age 18 for low-income children would represent a college savings account 2.5 times larger than the amount saved by the average middle-income family. Additionally, as non-white families make up a disproportionate share of low-income families, non-white families would receive a disproportionate share of the benefits.

While a high-income family's child would be no worse off under the AOAA, the legislation would provide relative benefits mostly to low-income children. 100 percent of low-income families would have substantial future savings for every child compared to the 10 percent of low-income families that currently report having any savings at all. A low-income family with $46,000 worth of AOAA assets would drastically reduce the ratio of mean white-family wealth to non-white-family wealth that recent research estimates at nearly 7 to 1 (Dettling et al., 2017). $46,000 would reduce the number of Black college students that need a loan to attend college and reduce the after-college debt for those Black students that still require loan assistance after AOAA savings. $46,000 would be a substantial down payment for a home and might be enough to allow low-income and non-white buyers to take advantage of the lower interest rates that often accompany higher down payments.

There is little doubt that the AOAA will reduce the income and racial wealth gap. However, the AOAA may be like the merit-based scholarships discussed earlier, in that the act still may help families who were likely to reach their goals without government assistance. This can be illustrated by revisiting the annual saving example, wherein the total benefit for a low-income family after 18 years is compared to the total benefit for a middle-income family after 18 years. Under the assumptions of this analysis, the low-income family would have saved $0 of their personal money but would have $46,000 to use for an AOAA-eligible purpose. Before the AOAA, the middle-income family would choose to save $18,000 over 18 years. After the AOAA, the middle-income family would have a choice to make: 1) the middle-income family could decide to save $18,000 of their personal money and supplement that amount with almost $13,000 of AOAA funds for a total of approximately $31,000 in savings; or 2) the middle-income family could choose to reduce the amount of their own money they put toward future saving by the amount contributed through the AOAA, and still have $18,000 in savings at the end of 18 years. In this manner, the middle-income family has once again converted the AOAA's initially restricted funds into an unrestricted cash gift of $13,000. This example is illustrated in **Figure 5**. This same result applies to any family that is middle-income or higher.

Figure 5: Total 18-Year Benefit Comparison for Middle- and Low-Income Families



Source: Figure prepared by the author. In both diagrams, point A represents a family's private savings for future education before AOAA. Point B is the family's savings after AOAA, including AOAA supplemental payments. Like the concept presented in Figure 4, after 18 years, the middle-income family is essentially able to convert the total AOAA benefit to an unrestricted cash grant that can be spent on any goods and still consume the same amount of future education. The low-income family does receive substantially more in total benefits, but the low-income family must use the benefit for fFuture eEducation. They are unable to convert the benefit into more "other goods."

In both diagrams, point A represents a family's private savings for future education before AOAA. Point B is the family's savings after AOAA, including AOAA supplemental payments. Like the concept presented in **Figure 4**, after 18 years, the middle-income family is essentially able to convert the total AOAA benefit to an unrestricted cash grant that can be spent on any goods and still consume the same amount of future education. The low-income family does receive substantially more in total benefits, but the low-income family must use the benefit for future education. They are unable to convert the benefit into more "other goods."

This brief does not argue that middle-income families do not need any assistance. Given widespread societal wealth disparity, middle-income families may well get priced out of higher education, home ownership, and other wealth-building activities. This brief merely highlights that, as written, the likely result of the AOAA is to essentially provide cash payments to middle-income families while providing substantial but policy-restricted funds to low-income families.

FINDINGS REVIEW AND POLICY RECOMMENDATIONS

Policy Recommendation #1: The AOAA is likely to incentivize some American families to have more children than they otherwise would. If policymakers seek to combat the declining fertility rate in the United States, policymakers should provide benefits for middle-income families at values equal to or greater than those currently proposed under the AOAA.

The first policy finding is that the AOAA is likely to incentivize middle-income families to have additional children due to the positive wealth and substitution effects that result from the policy. As wealth and substitution effects are absent from low- and high-income families, the AOAA is expected to have no impact on the decision of these families to have additional children. Given this and the results of similar proposals in other countries, the AOAA is likely to increase fertility rates in the US, holding all else constant. Increasing fertility rates would also impact the AOAA policy as more children being born implies more AOAA beneficiaries, though the impact of increasing beneficiaries on the AOAA program is beyond the scope of this brief. While increasing US fertility rates is not a stated goal of the AOAA, it could be achieved.

Policy Recommendation #2: If policymakers wish to avoid negative impacts on private saving levels for future child-related expenses, policymakers should limit AOAA beneficiaries to low-income families or reduce proposed benefits to middle-income families while offering to match middle-income families' saving up to a predetermined amount.

The second policy finding of this analysis is that the AOAA will likely lead to reduced private saving levels for future child-related expenses among middle-income families. Private saving levels for low- and high-income families are likely to be unaffected. The reduced saving level would result from middle-income families substituting AOAA funds for personal savings and using the money that would have been saved for present consumption. The overall effect is predicted to be like that of the Social Security program on retirement saving levels. If policymakers wish to eliminate this effect, they could limit the AOAA benefits to low-income families only. While this would not incentivize more saving, limiting the benefits to low-income families would remove the disincentive for middle-income families to reduce saving levels. An alternative option that policymakers could implement to possibly incentivize saving among middle-income families would be to reduce the proposed benefit and instead offer matching AOAA funds for every dollar saved by a middle-income family up to a predetermined amount. This would serve to continue aiding middle-income families, reduce AOAA program entitlement payouts, and incentivize private saving for future child-related expenses among middle-income families.

Policy Recommendation #3: If policymakers wish to achieve the maximum possible reduction in the income and racial wealth gap, policymakers should limit the AOAA beneficiaries solely to low-income families.

The final policy finding of this analysis is that the AOAA will likely reduce the income and racial wealth gap in the United States. Critically, though, further reduction of this gap is possible through modification of the policy. As written, the AOAA would provide $1,000 to every child, regardless of family income level. Additionally, the AOAA would provide an annual supplemental payment for all children in families making less than approximately $125,000 per year. Though these annual payments get smaller as a family's income increases, the question must be asked: At what income level is the AOAA helping families that do not need assistance? This brief posits that this income level is likely below that currently proposed under the AOAA. If policymakers want to reduce the income and racial wealth gap as much as possible, then all the benefits should go to lower-income families. Siphoning $1,000 payments and small annual supplements to families with less need simply makes the AOAA less effective at achieving the maximum reduction in the US income and racial wealth gap. Providing benefits to middle- and high-income families maintains the relative advantage of these families and perpetuates the inequality the AOAA is intended to reduce.

CONCLUSION

Child Development Accounts, such as those proposed under the American Opportunity Accounts Act, are one option in the policymaker's toolkit to establish saving and wealth-building vehicles for beneficiary children. Combining these accounts with policy tactics, such as progressive subsidies that target the lowest income households, and means-tested benefit exclusions may also reduce income inequality or the racial wealth gap at a wider societal level. Though the impact of Child Development Account policies will differ dependent on the benefit amount and the target beneficiaries, policymakers must consider that these policies create effects beyond increased wealth. This analysis of the AOAA highlighted some possible additional effects. Though the examined policy would likely reduce the income and racial wealth gap, the policy would also disincentivize saving for some Americans and could provide more immediate cash benefits to middle-income families despite low-income families receiving a larger benefit.

Additionally, the Act could incentivize some American families to have more children than they otherwise would. These effects will vary with the specifics of the policy, but the value of the economic analysis of the policy is a primary lesson for policymakers. In the application of economic principles to policies such as Child Development Accounts, policymakers gain a fuller understanding of the incentives created by a given policy and, in turn, increased insight into the individual and societal impacts of the newly formed incentives.

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