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Redesigning Social Welfare: Presenting a New Asset Poverty Measure

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Abstract

This study uses data from the Panel Study of Income Dynamics (PSID). Two traditional measures of asset poverty (net worth equal to 3 months at the poverty line; 3 months of annual income), and a new measure we refer to as asset empowerment (on track to achieve financial goal) are used to examine: median net worth trends by asset poverty status, asset poverty rates, economic mobility, probability of being asset poor, and how long it takes to exit asset poverty status. Further, using the three asset measures, we identify three different rungs on the economic ladder which represent different standards of living: survival (meet basic needs), security (cushion to withstand income shocks), and growth (freedom to pursue their economic happiness). Findings indicate that the majority (75%) of White college graduates are living at a security standard, while a majority (63%) of Black college graduates are living at a survival standard. Very few college graduates move from living at an asset poor standard to living at a growth standard between 2009-2021 (a low of 2% and a high of 4%). Survival analysis reveals that 13 years after college graduation, 38% of Black college graduates remain asset poor and 5% of White college graduates remain asset poor. However, having more graduation wealth is associated with a 62% increase in the likelihood of a college graduate moving from an asset poor standard to an asset growth standard of living. Policy implications discussed.

Keywords

Asset Poverty, Economic Mobility, Poverty, Wealth Inequality, Wealth

1. Introduction: The Right to the Pursue Happiness

In explaining the federal government's role in creating the New Deal, President

Franklin Roosevelt relied on the moral philosophy captured in the Declaration of Independence, the right to "life, liberty, and the pursuit of happiness". In doing so, he uses the right to life liberty, and the pursuit of happiness as a type of social welfare philosophy for crafting a uniquely American social welfare system through his New Deal reforms. He says, "Liberty requires opportunity to make a living decent according to the standard of the time, a living that gives man not only enough to live by, but something to live for." This can be interpreted as meaning, the purpose of the American social welfare system, and the role that government should play in it, is to provide every citizen with the capability (i.e., freedom) to pursue their own happiness (Sen, 1999). While it is not clear specifically what the founders meant by the pursuit of happiness, in the context that Roosevelt uses the phrase, having something to live for, it is about government's role in providing the economic conditions and facilitative institutions by which to pursue one's happiness. It is not about how one defines happiness itself. In talking about the role of government in providing a social welfare system, President Roosevelt also focuses on the freedom people have to pursue happiness, not on whether they achieve it, reflecting the American ideal of equality of opportunity, rather than of *outcome*. He would go on to say, without the opportunity to have something to live for, "life was no longer free; liberty no longer real; men could no longer follow the pursuit of happiness" (Roosevelt, 1938: p. 233). In this sense, to not provide government assistance in situations where the freedom to pursue happiness does not exist, is un-American and counter to its own moral philosophy.

Roosevelt's approach is like the approach the capability perspective takes (Sen, 1999). In this article, we attempt to build on the capability approach and Roosevelt's vision. The capability approach focuses on the moral significance of the freedom people have for achieving their own economic well-being (Sen, 1999). As such, it is also less focused on whether people achieve happiness than on the nature of the opportunity they have to achieve it. Within the financial capability framework, functionings are about what an individual can do today (i.e., current performance) and who they are today (i.e., self-identity) (Sen, 1985, 1999). Capabilities are a set of functionings that a person has access to—they represent their actual freedom to pursue their happiness (Sen, 1985, 1999). We identify a set of four functionings that we posit indicate whether a person is financially capable. If people have this set of functionings they are free to make choices about how to achieve their happiness: 1) when they are financially included, 2) have had adequate financial literacy training, 3) have enough income to meet basic needs and save for emergencies, and 4) enough wealth over a long enough time to be able to develop functionings for the purpose of achieving their own happiness (Elliott, 2025a). We further develop this framework and test the theory in article three of this special issue. In this article, we use the financial capability framework to help develop a new measure of asset poverty that might serve as a proxy for whether a person is financially capable.

It is important to acknowledge that not everyone is going to take advantage of

the freedom afforded them to pursue their own happiness. However, from a financial capability lens, the American government would not construct social welfare policies based on whether a few might not seize the opportunity afforded them. The government's obligation is to provide all citizens with the freedom to pursue happiness. It is the responsibility of each citizen to take advantage of the freedom provided to them. Further, it must be remembered throughout this article that the discussion about America's moral philosophy is about the aspirations for what this country is meant to be, not what it has achieved or for whom it has achieved it. For example, Roosevelt's New Deal itself failed to rise to this standard, preventing many Black families from benefiting from these policies (e.g., Faber & Sucsy, 2021). However, just because America has not met its vision for itself, does not mean it is not a good vision and one worthy of aspirations.

1.1. The Pursuit of Happiness, the American Dream, and Upper Mobility

While President Roosevelt was a Democrat, social welfare policies designed to provide people with freedom to pursue happiness is an American philosophy. The right to the pursuit of happiness became popularized in the lexicon of America, as the American Dream (Adams, 1931). And while people can have many different notions of what the American Dream means, most share some notion that a part of what it means is that everyone can achieve success and upward mobility through hard work and determination (Rank, Hirschl, & Foster, 2014). Certainly, the failure of the social welfare system to deliver on this Dream has left some Americans questioning whether it is still achievable for them and their children. For example, Borelli (2024) finds that only 53% of Americans continue to believe the Dream is achievable. However, just because there is a weakening in the belief that America can deliver on its promise, it does not mean that people do not believe that the American Dream is something the country should strive to achieve. The continued belief that every citizen has the basic right to the pursuit of happiness has been part of the glue that has bound Americans together through their most trying times. Further, many Americans believe it can once more be a unifying narrative (Schwarz, 2024—65% agree). It is also important to note, polling finds clear differences between when people are asked whether they *can* achieve the American Dream through hard work alone (Borelli, 2024—53% say yes), and whether they are asked *should* hard work lead to economic prosperity (Brookings Institution, 2008—94% say yes). This seems to be lost in the discussion around whether the American Dream is still something government should strive to achieve. It would appear from the polling discussed in this section, that most American's still think it should be.

So, in our discussion of the right to pursuit of happiness, we focus on the economic aspect while we fully understand it can have many different meanings for people. However, our focus is not on money or mobility itself, but on the conditions that provide freedom to pursue them. In this sense it is about the freedom

of choice people have in how to live and the role that economics plays. We also focus on the ideal captured in the American Dream, while fully understanding that America has not achieved this ideal.

America's Social Welfare System was not Designed to Support the Pursuit of Happiness

However, the American social welfare system has *not* been built on this ideal, so it should not be a surprise that America has fallen short of this ideal for many. As constructed and administered in both Republican and Democratic governance, the federal government's role has been to provide its citizens at least, those who meet outlined criteria—with just enough to survive. This minimal standard of federal obligation to citizens is perhaps most clearly articulated in the U.S. definition of poverty. Under the current definition, the goal is to identify households whose economic position falls below some minimally acceptable level and get them just above that level (though many phase out well below the poverty line). As such, the existing social welfare system has become, well, un-American. With the standard being set at having just enough to survive, rather than the aspirational "pursuit of happiness", the question becomes for policy makers, what is the minimum amount a family must consume to survive? People consume from their incomes; therefore, the social welfare system in America has focused almost exclusively on income approaches to end poverty. To better understand how the current approach to social welfare policies in America has always been doomed to come up short for most Americans, we first need to discuss the nature of income and wealth.

Next, we describe what the nature of income is and why income policies alone can never end poverty. Then we describe what the nature of assets are, and the role they can play in helping end poverty. From there, we move into a discussion on how current asset measures of poverty have also been defined from a consumption perspective. This definition we posit constrains and distorts assets' potential as catalysts for reaching toward American ideals of opportunity or for upward mobility. After, we present an alternative measure of asset poverty built on the extended notion of financial capability. This alternative measure we put forward better aligns with the right to pursue happiness. We finish by conducting a series of analyses on the different measures of asset poverty, discuss the results, and provide some policy implications before concluding.

1.2. Income Is for Consumption

In describing income, in *Assets and the Poor*, Michael Sherraden said, "Income refers to the flow of resources in a household, a concept associated with consumption of goods and services and standard of living" (Sherraden, 1991: p. 5). Because income is for consumption, it has the temporal characteristic of being perishable—here today and gone tomorrow. As such, by their very nature, social welfare policies that provide families with income are meant to solve only problems families face today. So, interventions like universal basic income or child tax credit

should be thought of as interventions meant to *directly* change people's current living conditions. Therefore, the impacts income interventions produce, in most cases, will not last long after the income is consumed.

So, if a child lives in a family that is poor and they receive guaranteed income payments for two years, for example, while they are receiving the payments, the child can eat more, and housing is more stable. Research has shown that CTC and UBI programs do have positive and important effects on reducing the symptoms associated with living in poverty (Neighly, Heneghan, & Childs, 2022). In as much as the payments are spent on basic needs, the current conditions of families and their children can be said to have changed in a tangible and often significant way for as long as the program lasts. However, their future economic conditions remain largely unchanged by the direct effects that these programs produce. It is important to emphasize, the focus here is on direct effects; it does not mean that these programs cannot have indirect effects on the future (e.g., a person gets a job because they buy a car to get to work). Moreover, when people are forced to rely on income alone, they learn to be present time oriented. Anyone who has been poor for even a little while knows that shortly after you get paid, you begin to count the days until the next pay. Your life is lived not in years, but days or weeks, and so your decisions are made based on a very short time horizon.

The treatment of poverty as only a problem of not being able to consume enough to survive today is why intergenerational data has been used by researchers to suggest that poverty for many is cyclical in nature. For example, 30% of all children and 37% of Black children who grow up in poverty remain poor as adults (National Academies of Sciences, Engineering, and Medicine, 2024). Treating poverty as a consumption problem leads to focusing on treating the symptoms of poverty which, while necessary and important for humanitarian aims, will never end poverty. This is despite the fact that many income policies do temporarily reduce the negative symptoms most associated with poverty, such as hunger or homelessness. A recent example of the temporary nature of income strategies for combating poverty can be found in the expansion of the Child Tax Credit (CTC) in 2021 as part of the American Rescue Plan (ARP). The CTC expanded from $2000 to $3600 per child for children under the age of six, and $3000 for children between the ages of six and 17. So, the income of a family of four rose by $7200 if their children were under the age of six and by $6000 if their children were between the ages of six and 17 years. The CTC has been credited with having reduced the child poverty rate by 46%, from 9.7% in 2020 to 5.2% in 2021 (Burns, Fox, & Wilson, 2022).

However, because income policies are for consumption, and they typically are designed to only provide enough to survive, once programs end, we hypothesize that the direct effects end with it. For example, when the expanded CTC expired in 2022, the collapse of its temporary relief plunged many Americans into even worse standing than when they began. In 2022, the number of children living in families with incomes below the poverty line rose to 12.4% (Shrider & Creamer,

2023). So, while families who received the expanded CTC were temporarily able to consume more of the secure housing, quality childcare, and nutrition they wanted for their children, they were far from achieving the promised "pursuit of happiness"—or the liberty the Founders envisioned. Research on guaranteed income programs has found similar outcomes. For example, Riccio and Miller (2016) in studying the Family Rewards guaranteed income programs, find that once the cash transfers ended after three years, the average income of the control and treatment groups no longer differed significantly. They say, "this outcome was a direct consequence of the failure of the program to lead to increased parental employment and earnings" (p. ES-6); the income support did not deliver lasting gains. Similarly, Cabral, Carey, and Miller (2025) find that cash payments only improved mental health and stress levels for about one year.

1.3. The Social Welfare System Not Only Provides a Floor, but a Ceiling

The current social welfare system not only provides a floor below which America's collective consciousness tells them the poor should not be allowed to fall, but all too often a ceiling on what they can become. A ceiling is created when social welfare policies reduce or bar benefits, establishing income and asset eligibility requirements at a basic needs level (Roll, Miller, & Despard, 2025). Means-tested social welfare policies contribute to the construction of a ceiling. A means-tested benefit is a public benefit where a person's income and assets are considered in determining eligibility for the program. While some of what we consider part of our social welfare system is actually social *insurance*, much of social welfare in the U.S. is means-tested programs: the Earned Income Tax Credit (EITC), Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), Medicaid, Supplemental Security Income (SSI), and Temporary Assistance for Needy Families (TANF). So, for example, in the case of WIC, a state agency's income standard must be set at between 100% and 185% of the federal poverty guidelines. This effectively creates an earnings ceiling. Researchers find that income increases of even a dollar or two per hour can result in thousands of dollars of benefit loss (Roll et al., 2025). And so, low-income workers can feel forced to stunt their own development by doing things like foregoing taking additional work hours, a raise, a promotion, or a job that will pay more if it makes them ineligible for public benefits (Roll et al., 2025). In this sense, income programs discourage development and pursuit of happiness as they relate to achieving one's own economic well-being.

In addition to income limits, public assistance programs often have another form of means-testing. Asset tests, which can separately disqualify, can create a disincentive for saving or even require families to sell off assets to meet eligibility requirements. Importantly, research finds that asset tests have a significant statistical effect on saving but not particularly large effects (Ratcliffe et al., 2016). This is in part because low-income families only have small amounts of wealth in the

first place and little left-over income for building wealth, after they pay for basic needs (Ratcliffe et al., 2016). Asset tests might be most harmful in a scenario where a policy shift occurs that better aligns with giving people something to live for. In this scenario, asset limits will prevent people from being able to fully benefit from such a change in policy.

The ceiling means-tests create on the ability of low-income families to build wealth may also impact economic mobility in America (Shiro, Pulliam, Sabelhaus, & Smith, 2022). Americans can break through the ceiling that participating in public benefits programs put on the poor but only if a low-income individual has extraordinary ability, effort, a bit of good fortune, and a sense of delusion about what they can do on their own. The maintenance of this ceiling has been justified through rhetoric that suggests if government provides more than what the poor need to survive, it will destroy our system of meritocracy. Those who have not put forth the required effort and/or do not have the required ability would be wrongly rewarded. However, the existence of such a ceiling is in opposition to America being able to live up to the ideal it set out for itself at its inception—the right all citizens have to "life, liberty, and the pursuit of happiness". As a result, an economic environment is created where low-income families are much more likely to be trapped in a cycle of poverty, moving just out of poverty but bound by the system to fall back into poverty later. This is diametrically opposed to the American ideal that effort and ability should determine winners and losers, not the socioeconomic class into which a person is born, but it is our landscape today. In a gross distortion of the concept of meritocracy, 27% of high-income children who are among the least gifted graduate from college, but only 24% of low-income children who are among the most gifted graduate from college (Dam, 2018). Even college graduates' outcomes do not portray a system that is functioning so that those who put forth the most effort and have the most ability achieve the best outcomes. For instance, research shows that Black heads of households who are college graduates have about 33% less wealth than White heads of households who drop out of high school (Hamilton, Darity, Price, Shridharan, & Tippett, 2015).

In the next section, we begin to discuss the nature of wealth. In doing so, we will also highlight how focusing on income programs for the poor, at the exclusion of wealth programs, is antithetical to America functioning as a meritocracy.

1.4. Wealth Gives People Control over Their Futures

In contrast with income's present orientation, wealth, in its pure sense, is a type of stock that is stored over time and not meant for short-term consumption needs. Instead of days or months, wealth focuses on future aims, measured in years or decades. Certainly, there are liquid forms of wealth whose purpose is to provide immediate access to cash for covering expenses, seizing opportunities, and managing financial risks. This is a valuable and important type of wealth. But here we are concerned with the developmental and growth effects of wealth, which we hy-

pothesize are associated more with long-term wealth. It might be easiest to think of wealth as being on a continuum. The shorter it is stored, the more it takes on characteristics of income (i.e., liquid or easy to convert to income), and the more it is about consumption. The longer it is stored, the more it takes on the characteristics of wealth (i.e., illiquid or harder to convert to income), and the more it is about development and growth.

Owning wealth gives people the power to convert legal rights to property into an income stream in the future. In this way, ownership of wealth gives people a legal stake in the future, enforced by the government and convertible to cash if, when, and how people choose. Understanding wealth as a legal right enforced by a strong stable government, it becomes clearer how owning wealth can create a sense of financial stability in a person and/or provide them with the confidence they need to take a financial risk. This confidence does not come from the monetary value assigned to the asset alone, but from the protection the government provides that the asset will be there for the individual to convert into cash when they need it in the future (de Soto, 2000).

Periods like the Great Depression and the Great Recession, brought into question the government's ability to protect people's right to the freedom to pursue the American Dream, which led to financial crises that threatened the American economic system and created shocks in our politics. Notably, in both cases it was policies that better aligned with America's moral philosophy for advancing social welfare that brought the country back from the brink of financial destruction. In the case of the Great Depression, it was Roosevelt's vision of a New Deal for struggling Americans, after War World II it was the Servicemen's Readjustment Act of 1944 (GI Bill), and in the case of the Great Recession, it was the American Recovery and Reinvestment Act of 2009 (made investments in various projects like infrastructure, renewable energy, and education). More recently, regarding the economic crisis that accompanied the COVID-19 pandemic, the government initiated the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) along with The American Rescue Plan Act of 2021. These are not meant to be examples of policies that perfectly align with America's moral philosophy for designing social welfare policies, certainly not in their implementation, but examples of when American policymaking has been guided by that ideal. With this caveat in mind, the way out of national crises has often been by adopting social welfare policies that better align with America's moral philosophy. This might shine light on a better path forward.

1.4.1. Differentiating between Direct and Indirect Effects of Owning Wealth

The direct effect of owning wealth is not the ability to make a purchase. Wealth must be converted into income to pay for what people want, college or a car or a home, for example. Once converted, it becomes income and is used for consumption. So, there is something that has to take place (i.e., an intermediary) between owning wealth and paying the tuition bill, for example. The wealth must be con-

verted into income. In this way, purchasing something with an asset—be it a college degree, a home, or retirement (i.e., buying something) can be thought of as an *indirect* effect of owning wealth. Crucially, when people have wealth, they gain corresponding characteristics which aid in their development and growth of functionings. These characteristics are separate from the economic value the asset is given. More specifically, wealth comes with a set of inherited properties that can augment and become integrated into the self. In line with this, Sherraden (1991) has hypothesized that wealth produces certain developmental effects. In the financial capability lexicon these effects are referred to as inherited properties of wealth:

- Financial stability
- Orientation toward the future
- Capitalist identity (i.e., a builder of wealth)
- Focus and specialization
- Risk-taking
- Confidence
- Social influence
- Political influence

The inherited properties associated with owning wealth become internalized as part of the individual's self-identity, what we would think of as characteristics (see Sen, 1999). After they are internalized, judgments a person normally would have to make about themselves before making a decision to act become automatic responses to environmental cues. For example, they no longer need to make a judgment about whether they are a risk taker; seeing themselves as a person who takes risks, they simply respond as a risk taker would.

Sherraden (1991) presented these as indirect effects. For instance, he said, "To be successful, this theory would specify and begin to demonstrate economic, social, and psychological outcomes *in addition to potential consumption* that constitute welfare benefits of assets" (p. 147). He added the emphasis to stress that these effects were not the main effect of owning an asset. Until recently, Elliott (2025a) also understood the inherited properties of wealth as indirect effects. However, locating wealth's delayed consumption effects as indirect flips this understanding. It is only the characteristics of wealth that accrue while wealth is still in asset form that are *direct effects*. Consuming assets requires first converting them into income. This distinction is crucial for understanding why wealth is important for ending poverty and aligning America's social welfare system with its moral philosophy—the idea that government's purpose should be to facilitate the pursuit of happiness. Rethinking the definitions of assets' indirect and direct effects brings to the forefront the pivotal role that wealth plays in people's development of financial capability. This is like the meaning conveyed in the saying, "if you give a person a fish (income), you feed them for a day. If you teach them how to fish, you feed them for a lifetime". In this case, it might be more accurate to say something like this, "if you teach them how to become financially capable, you give them income for a lifetime".

1.4.2. Wealth Promotes Development

So, assets are for development which occurs over years, not weeks and months. Because wealth promotes development, it is a necessary tool for ending poverty. It also might make clear why income and assets should be treated as distinct from one another. If the direct effect of income is, for example, being able to buy more food, then it is particularly important for minimizing symptoms associated with poverty, such as hunger. However, hunger, like coughing from a cold, will come back so long as the root cause is not addressed. At the same time, it might also make clear why income policies are not sufficient for ending poverty. Hunger does not cause people to be poor; people are hungry because they do not have the financial capability to produce enough money to buy food on a regular basis. This suggests that the cause of poverty is the individual's lack of financial capability. It also highlights the idea that poverty consists of both a *now* problem which income is best suited to tackle, but also a future problem which wealth is best suited to tackle, being able to produce money to buy food in the future. Ignoring the future, which is about developing the financial capability to fish (i.e., produce wealth), means the person is most likely doomed to return to poverty. This is not to suggest that income does not have a role in producing financially capable people; it does. For example, income can be converted into wealth which then can be used to produce even more wealth (Elliott & Rauscher, & Nam, 2018). It is just that it plays a different role than wealth does.

An example of how assets promote development which better positions people to be more financially capable can be found in research on Children's Savings Accounts (CSAs). CSAs are wealth building vehicles which often start at birth or kindergarten. In practice they have been used to help children, and their families pay for college costs. However, they were originally intended to be lifelong accounts that could also be used to build wealth for retirement (Sherraden, 1991). And while it appears to the authors, in the media and in the public discourse, the term CSAs is more broadly used, and more familiar, Sherraden (1991) originally called them, and continues to refer to them as Child Development Accounts (CDAs).

Unlike basic savings accounts, CDAs leverage investments by individuals, families, communities, employers, local, state, and federal governments, philanthropists, foundations, and others as a way of building assets (Elliott, 2023). Findings on CDAs reveal that the main way assets in these accounts impact children is by helping them to develop characteristics associated with wealth over many years. For example, research shows that having savings for college improves children's math and reading scores (Elliott, 2009; Elliott, Sorensen, Zheng, & O'Brien, 2023), their educational expectations (Elliott, 2009; Elliott, Zheng, Sabol, & O'Brien, 2021), and their social emotional development (Huang, Sherraden, Kim, & Clancy, 2014) to name a few. The proposition that CDAs' direct effects are more about developing the characteristics linked to owning wealth than the indirect effects when wealth is converted to income is seen in the case of Kindergarten to College

(K2C). K2C is now over 13 years old. It is the City of San Francisco's citywide CDA program. However, participants in the program have saved, on average, a modest amount compared to the cost of college. Overall, participants in K2C have about $179 on average when they reach college age. If they are savers (i.e., contributed at least once), they have about $1133 (Elliott, 2025b). In contrast, the average cost of attendance at a public 4-year college in-state institution in the 2022-2023 school year was $45,040 over four years (College Board, 2022). So, given the amount they have in their accounts, these children cannot convert their wealth into enough income to pay for a college degree. Yet, findings show that children participating in K2C, particularly underrepresented students (i.e., Black/African American, Hispanic/Latino, Filipino, Pacific Islander or American Indian/Alaskan Native), enroll in college at higher rates than their peers who are not K2C participants (Elliott, Sorensen, & O'Brien, 2024). This suggests that the main way wealth accumulated in K2C accounts impacts children is by augmenting their development of characteristics associated with owning wealth over the course of their years in K-12 schooling. This better prepares them to meet enrollment requirements once they reach college age. Importantly, it also positions them to have a stronger return on their degree once they graduate from college. For example, it might be that participants in K2C have improved odds of enrolling in college despite having small sums saved in their account. Using the average amount saved in K2C ($179 on average; $1133 for savers), if they are non-savers who graduate from college, Elliott (2025b) speculates that the odds of reaching median net worth of U.S. households increase by 42%; if they are a saver, by 58% using findings from Elliott, Osafo Agyare, and Min (2025). Further, Rauscher (2016) finds that parents' education support of more than $600 has a positive impact on adult children's income, and about $2200 has a positive impact on their wealth.

1.5. Common Approaches for Measuring Asset Poverty

Somewhat ironically, the asset field has largely ignored the impact that owning wealth can have on the development of the characteristics linked to owning wealth when measuring asset poverty. Instead, they adopted a consumption approach to defining and measuring asset poverty. While Oliver and Shapiro (1997) were the first to develop a measure of asset poverty, economists Robert Haveman and Edward Wolff have written extensively on the topic. They describe the measurement of asset poverty in explicitly consumption terms: "Do the assets held by the household enable it to live at a minimum level of consumption for a temporary period, should other source of income—e.g., earnings—be unavailable during this period? As such, this measure complements standard measures of income poverty" (Haveman & Wolff, 2004: p. 145). There are two common definitions of asset poverty that align with this definition:

- Asset Poverty 1: residing in a household that lacks sufficient wealth to remain above the official poverty line for three months (Oliver & Shapiro, 1997).
- Asset Poverty 2: residing in a household that does not possess wealth equiva-

lent to three months of total family income (Wolff, 2017).

In both instances, the focus is on whether a household has enough wealth to facilitate the consumption needed to maintain a minimum standard of living. This can be thought of as having enough survival assets to feel secure. Using either of these consumption-focused definitions, an individual is classified in this study as being either asset poor or asset secure.

1.6. Measuring Asset Poverty from a Financial Capabilities Perspective

In this section, we want to introduce a new measure of asset poverty that borrows from Sen's (1999) capability framework and Roosevelt's articulation of America's moral philosophy. We say borrow because the goal here is to provide a proxy (i.e., substitute) for measuring financial capability, not to measure it directly. Proxies are needed when direct measurement of a variable is difficult. In many data sets, government agencies might find it difficult to collect information on the set of four functionings that make up financial capability. Given this, a proxy would appear to provide utility. Further, it is more consistent with how asset poverty has been measured in the past and thus will allow for findings that are in the form that people are more used to seeing and interpreting.

The asset empowerment proxy might provide an impetus toward shifting the conversation from whether a family meets survival or security standard of living to discussing whether they are financially capable of doing so over the long term. In this study, an individual is not asset poor when they are on track to achieve a financial goal (e.g., pay for college, start a business, buy a home, retire). We use age-based savings benchmarks recommended by financial professionals to determine if a college graduate is on track to reach their retirement goal (Fidelity, 2025). Depending on the goal, different benchmarks can be used to determine whether participants are on track. Here we have chosen retirement because they are known benchmarks. Further, if a college graduate is on track to reach their retirement goals, it would seem they would also be more likely to be on track to reach other financial goals that come earlier such as buying a home or paying for their child to attend college.

These retirement targets represent the proportion of an individual's annual income they should have in accumulated net worth by specific ages to maintain a standard of living in retirement that allows for continued well-being and the pursuit of personal fulfillment. Meeting these benchmarks serves as an indicator of financial functioning (which is about what a person can do today as an indicator of whether they are on track to meet the goal of retirement):

- By age 34 – savings equal to 1× annual salary
- By age 39 – savings equal to 2× annual salary
- By age 44 – savings equal to 3× annual salary
- By age 49 – savings equal to 4× annual salary
- By age 54 – savings equal to 6× annual salary
- By age 59 – savings equal to 7× annual salary

It is worth pointing out that as people age, typically their income increases (e.g., York, 2019). So, an individual's baseline salary is also increasing over time. In any case, each successive age group requires a higher level of financial capability, and individuals may fluctuate in and out of meeting these thresholds over time—achieving the benchmark at one stage while falling short at another. This is not to say this is the only way asset empowerment can be operationalized. Part of how it is operationalized will depend on the financial goal and looking at standards about what is needed to be on track. Instead, this example is only meant to show how following the moral philosophy of government responsibility to provide families with the freedom to pursue happiness provides a different way of defining asset poverty, and who is asset poor in America. In this article, to be asset empowered means producing wealth at a level commensurate with someone who can retire comfortably.

However, asset empowerment does not measure whether a person has the requisite functionings to be said to be financially capable. It still is the case, by asset empowerment definition, that a person can be asset empowered and not financially capable. This is because a person could simply be gifted (e.g., inheritance, lottery, etc.) with enough wealth to be classified as on track for retirement but not financially capable. Thus, they would not be able to continue producing wealth at a high enough level over time to maintain their standard of living. Within the capability framework, how individuals convert characteristics associated with owning wealth into functionings is part of the utilization function (Sen, 1999). More simply put, people have different levels of personal resources in the form of effort and ability, but also different preferences, which help determine whether they are actually financially capable. So, even if the government provides the necessary conditions for people to have the freedom to pursue the American Dream, it will not create inequality. It just assures that winners and losers will not be determined by the economic situation they are born into, but instead by their development and application of innate ability and demonstrated effort.

1.7. Asset Poverty, America's Moral Philosophy, and Assessing Economic Mobility

The three asset poverty measures used in this study may provide a different way to think about economic mobility in America when thought about as representing different rungs on the economic ladder. From this perspective, the different rungs on the economic ladder represent not simply more wealth or less wealth, but a different living standard. They represent different levels of access to the promise of America, the freedom to pursue financial well-being for oneself and their family.

All three asset poverty measures are dichotomous variables. In the case of Asset Poverty 1 and 2, people are classified as being either asset poor or asset secure. Asset Poverty 1 measures whether a family has enough survival assets to live at the poverty line for three months. As such, we hypothesized that this would rep-

resent a lower standard of living than Asset Poverty 2 because living at the poverty line for three months would be a lower standard of living than if a family has enough survival assets based on their annual income, instead of the poverty line. In the case of Asset Poverty 1, they might have to change how they live if their income went away, whereas in the case of Asset Poverty 2, they would be able to maintain their current living standard. This assumes that three months of annual income is much larger than three months at the poverty line. We are adding this next statement after we analyzed the data; in reality, we find very little difference between Asset Poverty 1 and 2. So, in the remainder of this section, to save space, we will just refer to Asset Poverty 1.

In line with the dichotomization of Asset Poverty 1 and 3, where Asset Poverty 1 is dichotomized as asset poor or asset secure, and Asset Poverty 3 is dichotomized as asset poor and asset empowered, we create three different rungs on the economic ladder which represent different standards of living: survival, security, and growth. These three categories are not arbitrarily chosen. They come from research done on hierarchical financial needs theory (Xiao & Noring, 1994; Xiao & Anderson, 1997). Xiao and Noring (1994) find that low-income families more often save to meet daily expenses, middle-income families save for emergencies, and their high-income counterparts save to meet their growth needs. And so, low-income families are much more susceptible to income shocks (temporary losses of income) making their life circumstances much more topsy-turvy. One day they are living in a home and able to eat, the next they are without income, homeless, and hungry. For them, the future is tomorrow, and the kind of wealth they focus on building is for today. Because wealth has a much shorter-term income-like purpose, storing money under the mattress (i.e., informal methods) might seem to many low-income families as effective and maybe even more effective method than a formal bank. This is in part to avoid monthly fees or fees for overdrafts (Welburn & Nygaard, 2024). Given the uncertainty of their income streams and inability to overcome emergency expenses, even minor emergencies like unpredictable bank fees can present a financial crisis for low-income families.

What low-income families sometimes think (Sherraden & McBride, 2010) and are too often taught through policy (e.g. asset tests in means-tested policies; see Roll, Miller, & Despard, 2025), is that saving for them is a way to store money for future consumption needs (i.e., wealth as short-term, favoring more liquid forms). They do not think, or it is hard for them to think because of barriers, that saving is a type of investment that can be used to build wealth for future growth and development (i.e., wealth as long-term, favoring more illiquid forms) (e.g., Xiao & Noring, 1994; Xiao & Anderson, 1997). In contrast, middle-income families are better equipped to handle income shocks, which have become much more common (e.g., increased by 30% from 1970-2000's; Dynan, Elmendorf, & Sichel, 2013). For them, wealth is focused on security. They think they have enough income to survive today, but the world is very unpredictable. They now need wealth to protect them when a crisis happens, and income is cut off for a period of time.

What seems clear is that neither the survival rung nor the security rung rises to a standard of building wealth for growth and development. For one, savings is more about when the paycheck runs short, can we make it to the next paycheck, which suggests their basic income is not enough for survival. The other is about whether they miss a few paychecks, and whether they can maintain their current standard of living, which suggests that their income is sufficient for survival, but they need security against the uncertainty of life. Both represent very different standards of living or very different positions on the economic ladder. However, neither positions them financially to pursue their own economic well-being. This has led to a sense that the American system is failing. For example, recent polling shows that 66% of Americans think major economic changes or complete reform is required (Wike, Fagan, Huang, Clancy, & Lippert, 2025).

2. Methods and Analysis Plan

The main research questions are broken down by type of analysis.

Panel Logistic Regression

1) Does family birth wealth (ages 0 - 4), family enrollment wealth (ages 17 - 22), or the adult child's graduation wealth (25 - 30) increase the odds that a college graduate will not be asset poor by early middle age (37 - 42)?

Survival Analysis

Kaplan-Meier Curves

1) How many years does it take White college graduates, compared to Black college graduates, from the time they graduate until they are no longer asset poor in early middle age?

2) How many years does it take financially literate college graduates, compared to those who are not, to escape asset poverty between graduation and early middle age?

3) How many years does it take individuals with low college debt, compared to those with high college debt, to exit asset poverty between graduation and early middle age?

Cox-Proportional Hazard Model

1) Does financial literacy reduce the time it takes to escape asset poverty by early middle age?

2) Does having greater birth wealth, enrollment wealth, or adult wealth reduce the time it takes to exit asset poverty by early middle age?

2.1. Data

This study uses longitudinal data from the Panel Study of Income Dynamics (PSID), a nationally representative sample of over 18,000 individuals living in 5000 families in the United States. PSID collects information on employment, income, and wealth with a high degree of validity (Juster et al., 1999; Pfeffer et al., 2016). The survey was conducted annually from its first survey in 1968 until 1997, and biannually thereafter. Wealth information has been collected every 5 years

since 1984 until 1999, and every other year since then. Although it is a longitudinal study, the PSID has consistently achieved high response rates, remaining above 95% since 1970 (Schoeni et al., 2013). For detailed information about the PSID data, readers are referred to (Beaule et al., 2023).

2.2. Sample

Since the first available wealth information is from 1984, the time frame analyzed in this study is 1984 to 2021. To investigate the impact of birth wealth, the age of the sample was restricted to 0- to 5-year-olds in 1984. These individuals were aged 37 - 42 by 2021, which is referred to as early middle age or established adulthood stage (Levinson, Charlotte, Edward, Levinson, & McKee, 1986). For testing the impact of financial capability, this study uses the Well-Being and Daily Life 2016 Supplement survey data and restricts the sample to those who responded to the study. The sample in this study is restricted to Black and White individuals who hold a bachelor's degree from a four-year college or university to investigate the return on their degree after graduation. The focus on these racial groups is justified by the small number of individuals from other racial backgrounds. The small number of other racial groups is because in the basic PSID sample did not include Latinos unless they co-resided with persons in the U.S. in 1968. Further, the Latino supplemental sample was not added to the PSID until 1990 (Beaule et al., 2023). With these restrictions, our sample included 576 households.

2.3. Measures of Outcome Variables

We create three different measures of asset poverty:

Asset Poverty 1. What is referred to in this study as Asset Poverty 1, Haveman and Wolff (2004) define as when a college grad's household lacks sufficient wealth (i.e., net worth) to remain above the official poverty line for three months. Based on this definition, we create a time-varying binary variable where an individual is considered asset poor if, in any given year, their level of assets—adjusted for household size—falls below one-quarter of the annual poverty line, as determined by the U.S. Census Bureau. This is a dichotomous variable with the following two categories: asset poor and asset secure.

Asset Poverty 2. Oliver and Shapiro (1997) provided an alternative definition of asset poverty which will be called Asset Poverty 2. It is when a college grad's household does not possess wealth (i.e., net worth) equivalent to three months of total their annual family income (also see Shapiro, 2004). The rationale behind this definition is to evaluate whether a household has accumulated enough assets to endure a period of financial instability, such as three months, without relying on a continuous income stream. This is a dichotomous variable with the following two categories: asset poor and asset secure.

Asset Poverty 3. An individual is asset empowered when they have a set of functionings that make them financially capable of producing wealth in a high enough amount that they can be said to be on track to achieve a financial goal

(e.g., pay for college, start a business, buy a home, retire). We determine what a high enough amount is from what financial brokers have suggested people should have in net worth during different ages if they are to retire comfortably (Fidelity, 2025). Graduates who are currently capable of producing wealth at a level that would allow them to reach their financial goals, we identify as being asset empowered. So, this is a dichotomous variable with the following two categories: asset poor and asset empowered.

In this study, being asset empowered is operationalized as when college graduates have an amount of net worth equivalent to X times their *annual* income. Instead of using the amount saved for wealth, we use net worth. As Haveman and Wolff (2004) state, "A portfolio of assets as complete as net worth is a point-in-time stock that reflects prior saving and other asset accumulation decisions taken over a long period of time" (151). As such, we see it as a better indicator of a household's overall wealth position.

Because the data go up to ages 37 to 42, we examine the following wealth building goals:

- 25 - 30 yrs = 1x
- 30 - 35 yrs = 1x
- 33 - 38 yrs = 2x
- 35 - 40 yrs = 3x
- 37 - 42 yrs = 3x

Economic Mobility

We created four dummy variables to examine economic mobility in America from the perspective of Asset Poverty 1, 2, and 3. So, each of the four economic mobility dummy variables are created for Asset Poverty 1, then Asset Poverty 2, and lastly for Asset Poverty 3.

Moved to Not Poor. This is a dichotomous variable with the following two categories: previously poor and moved to not poor.

Moved to Poor. This is a dichotomous variable with the following two categories: previously not poor and moved to poor.

Stayed Not Poor. This is a dichotomous variable with the following two categories: previously not poor and stayed not poor.

Stayed Poor. This is a dichotomous variable with the following two categories: previously poor and still poor.

2.4. Variables of Interest

Race. Race was indicated with White as the reference group, given that the study focused exclusively on Black and White individuals.

Student Loan Amount. Additionally, a measure of student loans was obtained, representing the cumulative amount of student loans held by all household members as of 2011. Both the student loan and household income variables were inflation-adjusted to 2021 dollars. Over a quarter of households reported having zero student loans, while others had varying amounts. Like household income, to ad-

dress this, we transformed the student loan variable using the IHS transformation.

Financial Literacy. The financial literacy measure in this study is modeled closely after the approach used by Bialowolski et al. (2021). We use data from the Well-Being and Daily Life 2016 Supplement survey to create a binary variable that serves as an indicator of financial literacy. This measure, widely utilized in the literature (see Lusardi & Mitchell, 2007; Schmeiser & Seligman, 2013), is based on respondents' correct answers to the following three questions:

1) "If the chance of getting a disease is 10 percent, how many people out of 1000 would be expected to get the disease?"

2) "If 5 people all have the winning numbers in the lottery and the prize is $2 million, how much will each of them get?"

3) "Suppose you have $200 in a savings account. The account earns 10 percent interest each year. How much would you have in the account at the end of two years?"

Respondents who answered all three questions correctly are classified as financially literate. Importantly, for conducting longitudinal analysis, research shows that financial literacy is relatively stable over time (Angrisani, Burke, Lusardi, & Mottola, 2023). Therefore, it can be used in longitudinal analysis even when it is measured only at one point in time.

Net Worth/Wealth. Household net worth in the PSID is calculated by summing various types of assets held each year, including business assets, checking or savings accounts, real estate, stocks, and other assets, and then subtracting all outstanding debt. This provides a time-varying measure of net worth. Throughout the study, the terms "*net worth*" and "*wealth*" are used interchangeably. Each year's net worth values were inflation-adjusted to 2021 levels using the Consumer Price Index (CPI).

From the net worth variable, we derive several asset-related variables:

1) Birth Wealth: This is the 1984 household net worth when individuals were between the ages of 0 and 4.

2) Enrollment Wealth: This represents the 2001 household net worth when individuals typically enroll in college; between the ages of 17 and 22.

3) Graduation Wealth: This is the 2009 household net worth when individuals typically graduate from college; between the ages of 25 and 30.

2.5. Control Variables

Total household income was measured as a continuous variable in the PSID, calculated as the sum of total household income from the previous tax year, including all taxable income, transfer income, and Social Security income for everyone in the family. We collected data on household income for the following years: 1984, 89, 94, 2001, 2003, 2005, 2009, 2011, 2013, 2015, 2017, 2019, and 2021. Negative income values were trimmed to zero. Household income was highly skewed, which could pose potential issues in our analysis. To address this, we transformed this variable using the Inverse Hyperbolic Sine (IHS) transformation (Pence,

2006). The transformation can be expressed as:

$$\text{Sinh}^{-1}(\theta w) = \theta^{-1} \ln(\theta w + (\theta^2 w^2 + 1)^{1/2})$$

In which θ is a scaling parameter and w is net worth. This approach allowed us to include households with zero student loans without excluding them from the analysis (Pence, 2006). In addition, a comprehensive set of covariates are controlled for in 1984 when assessing the influence of various wealth variables on different return on degree outcome variables. Key demographic differences were accounted for such as, family size and characteristics of the household head such as race, marital status, education level, and employment status.

Family size was quantified as the number of individuals in the household. The household head's age was measured in years. Marital status was recoded as a binary indicator for whether the household head was married. The education level of the household head was categorized based on the years of schooling completed: those with 12 years or less were classified as having "high school or less" education; those with more than 12 years but fewer than 16 years were categorized as having "some college"; and those with 16 years or more were classified as having "four-year college or more" education. Employment status was also considered, with the unemployed being the reference group. Additionally, the sex of the individuals was controlled for as a dichotomous variable, with male serving as the reference group.

3. Analysis Plan

3.1. Panel Logistic Regression

The longitudinal structure of the PSID data provides a valuable opportunity to analyze the relationships between various asset variables and the probability of becoming asset secure or empowered over time. To account for the correlations within subjects that arise from repeated measurements, we employ a logistic model using Generalized Estimating Equations (GEE) (Liang & Zeger, 1986). GEE is specifically designed to handle correlated data typical in longitudinal studies, where the outcome variable is binary (e.g., rich/poor, success/failure). Unlike traditional regression models that assume independence of observations, GEE allows us to specify a working correlation structure, which models the relationship between repeated measures or clustered data. This approach is preferred to alternatives such as mixed models because GEE coefficients represent the average population effect of predictors on the response variable, which aligns with our study's focus on population-level inference rather than individual-specific effects.

Moreover, GEE offers robust standard errors that remain consistent even if the working correlation structure is miss-specified, making it a reliable method for analyzing correlated data. In our analysis, we use the quasi-likelihood information criterion (QIC) to select the most appropriate working correlation structure (e.g., exchangeable, autoregressive, unstructured).

The impact of asset variables on the probability of the response variables (becoming asset secure or asset empowered) while controlling for other variables can be modeled as:

$$\log it\left(P\left(Y_{ij}=1\right)\right)=\beta_0+\beta_1 X_{1ij}+\beta_2 X_{2ij}+\cdots+\beta_{pij}X_{pij}$$

where Y_{ij} is the binary outcome for the *i-th* individual in the *j-th* year, $\log it\left(P\left(Y_{ij}=1\right)\right)$ represents the log-odds of the outcome, $X_{1ij}, X_{2ij}, \cdots, X_{pij}$ are the predictor variables for the *i-th* observation in the *j-th* year, and $\beta_1, \beta_2, \cdots, \beta_p$ are the coefficients for the predictor variables.

We estimate four logistic GEE models to assess the probability of becoming asset secure or asset empowered under the three asset poverty definitions, while incorporating the control variables. This comprehensive modeling approach allows us to rigorously evaluate the impact of asset variables on financial outcomes across the study period.

3.2. Survival Models

Survival analysis (Elandt-Johnson & Johnson, 1999) is used to model the time it takes for college graduates to reach the two asset poverty variables and the one asset empowered variable. We begin by visually comparing the survival probabilities among different groups. Here, "survival" refers to those who have not yet reached one of the three definitions of asset poverty at a given time, while "failure" indicates those who have. We utilize the Kaplan-Meier estimator (Kaplan & Meier, 1958) to inspect survival functions across various groups, specifically examining how the probability of becoming asset secure or asset empowered differs among Black and White college graduates. We also examine how it differs based on student loan class (with households having cumulative loans less than $10,000 in 2011 classified as low debt, and those above as high debt). These comparisons are tested using the log-rank test, which evaluates the null hypothesis that survival probabilities for becoming asset secure or asset empowered do not significantly differ among the groups.

Another key objective of our study is to model the impact of wealth variables on the time it takes for college graduates to become asset secure, or asset empowered, while controlling for various covariates. For this purpose, we employ the Cox Proportional Hazards (Cox PH) model (Kelly & Lim, 2000), a widely used semi-parametric model in survival analysis that assesses the influence of explanatory variables (covariates) on the hazard function. The Cox model is advantageous because it does not assume a specific distribution for survival times, offering greater flexibility compared to fully parametric models. It allows us to identify risk factors affecting the likelihood of survival (i.e., not becoming asset secure or asset empowered) while adjusting for potential confounders.

The Cox model is mathematically expressed as:

$$h\left(t\middle|X\right)=h_o\left(t\right)\times\exp\left(\beta_1 X_1+\beta_2 X_2+\cdots+\beta_p X_p\right)$$

where:

- $h(t|X)$ is the hazard function at time t given the covariates $X_1, X_2, \cdots, X_p$.
- $h_o(t)$ is the baseline hazard function, representing the hazard when all covariates are zero.
- $\beta_1, \beta_2, \cdots, \beta_p$ are the coefficients corresponding to the covariates.
- $exp(\beta_i)$ represents the hazard ratio associated with a one-unit increase in the covariate X_i.

The Cox model's key assumption is that of proportional hazards, which posits that hazard ratios between groups remain constant over time. This implies that the effect of covariates on the hazard is multiplicative and does not change with time. This assumption can be tested using statistical methods based on Schoenfeld residuals. If the assumption fails (indicating that the hazard ratio is time-dependent), adjustments such as incorporating time-varying covariates can be made, allowing the effect of the covariate to vary over time.

In all survival models, college graduates are tracked from their completion year (2009) and followed up in 2014, 2017, 2019, and 2021. Graduates who become asset secure or asset empowered in any of the follow-up years are considered censored from the risk pool. All analyses are conducted using R version 4.4.1.

4. Results

4.1. Descriptive Results

Table 1 presents the baseline statistics for the categorical variables in the study. As we follow the sample from 1984 through 2021, the baseline statistics mostly refer to 1984, except for the financial literacy variable, which was collected in 2016 only.

Table 1. Descriptive statistics for control variables.

Categorical Variables	N	%
Household (Parent/Head's Information)		
Race		
White	377	65
Black	199	35
Marital Status		
Married	471	82
Not Married	105	18
Education Level		
High School or Less	304	53
Some College	126	22
Four-Year Degree or More	143	25

Continued

Employment Status					
Employed	481			84	
Unemployed	95			16	
College Graduates' Information					
Gender					
Male	231			40	
Female	345			60	
Financial Literacy					
Literate	212			39	
Not Literate	329			61	
Continuous Variable	**Mean**	**Median**	**SD**	**Min**	**Max**
Household Income	$27,600	$24,600	$21,500	$1.00	$167,000
Household Size	4.12	4.00	1.15	1.00	9.0
Student Loan Amount	$20,280	$1807	$38,746	$0.00	$331,275
Early Wealth	$208,091	$46,821	$1,411,774	−$393,869	$23,578,607
Enrollment Wealth	$389,786	$81,689	$2,776,665	−$188,457	$65,816,267
Graduation Wealth	$74,465	$6315	$308,410	−$212,191	$4,085,949

PSID = Panel Study of Income Dynamics.

The sample includes 576 individuals, with a gender distribution of 60% female (n = 345) and 40% male (n = 231). Regarding racial composition, 65% of the respondents identify as White (n = 377), while 35% identify as Black (n = 199). In terms of marital status, a majority of the sample, 82% (n = 471), are married, whereas 18% (n = 105) are not married. The education level of the householders shows that 53% have a high school diploma or less (n = 304), 22% have attended some college (n = 126), and 25% have completed four years of college or more (n = 143). For the unemployment status, 84% of the householders are employed (n = 481), while 16% are unemployed (n = 95). Regarding financial literacy, 39% of the respondents demonstrate their financial literacy (n = 212), compared to 61% (n = 329) who do not.

4.2. Median Net Worth Trends by Asset Poverty Status and Race (1984-2021)

Figure 1 provides information on median net worth by asset poverty status for the full sample from 1984 to 2021. It includes data from all three asset poverty measures. In the case of the asset poor, for both Asset Poverty 1 and 2, the trend

is mostly flat with a very slight downward slope over time. Conversely, for the asset secure, there is a steady slope upward until the Great Recession and then there is a marked decline. After (2009/2010), the end of the Great Recession, it restarts a much more rapid climb upwards. Except for the dip due to the Great Recession, the data align with the life cycle hypothesis (Modigliani & Brumberg, 1954). The life cycle theory suggests that young parents will have less wealth when they are early in their careers, but as they age, they begin to build more wealth.

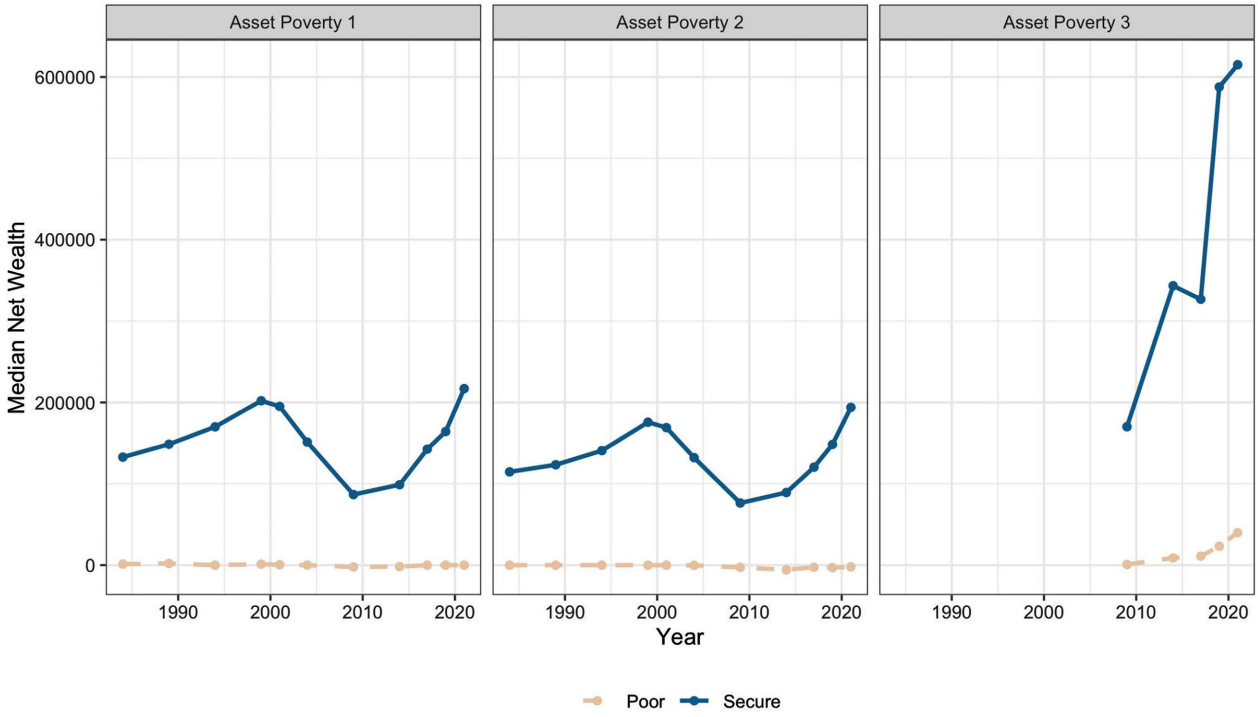

Figure 1. Median net worth over time by asset poverty status.

For the Asset Poverty 3 measure, data are not available until 2009 based on how the measure is constructed. In 2009, adult children aged 25 to 30 have graduated from college and the Great Recession has just ended. While it is mostly likely the case, since this is the first year Asset Poverty 3 is measured, we do not know if the 2009 data point represents the beginning of the upward trend as it did for Asset Poverty 1 & 2 in 2009. For asset empowered, the trend in the data is a sharp upward trend with one exception. In 2019 there is a small drop in wealth that occurs for the asset empowered. According to Barro (2020), this was the first time there had been a drop in wealth inequality since 1992. He attributes the drop in families with less wealth gaining a larger share of wealth, making wealth less concentrated at the top of the wealth distribution (Barro, 2020). This may help explain this drop in wealth among the asset empowered sense they represent the highest wealth bracket examined in this study. Overall, the median net worth of college graduates who are asset empowered rapidly grows from 2009 until 2021 with a slight decline in 2014, but a quick, sharp recovery (see **Table 2**).

Table 2. Aggregate descriptive statistics for asset poverty measures.

	Asset Poverty 1			Asset Poverty 2			Asset Poverty 3		
	Poor			Poor			Poor		
Year	$\bar{x}$	M	SD	$\bar{x}$	M	SD	$\bar{x}$	M	SD
1984	$862	$500	$11,601	−$663	$0	$12,361	n/a	n/a	n/a
1989	$1936	$950	$7218	−$16	$0	$6,586	n/a	n/a	n/a
1994	−$102	$0	$23,393	−$2436	$0	$25,358	n/a	n/a	n/a
1999	−$2386	$726	$25,213	−$5066	$0	$26,992	n/a	n/a	n/a
2001	−$1375	$330	$14,496	−$2197	$1	$15,282	n/a	n/a	n/a
2004	−$4870	$0	$20,146	−$6580	−$200	$21,053	n/a	n/a	n/a
2009	−$13,145	−$1725	$28,293	−$13,566	−$2170	$29,049	$3097	$600	$40,386
2014	−$23,102	−$1500	$82,882	−$26,305	−$5000	$86,593	$22,929	$7750	$98,730
2017	−$22,110	$0	$63,679	−$25,939	−$2300	$66,176	$36,366	$10,000	$106,877
2019	−$25,008	$0	$63,846	−$28,824	−$2900	$65,958	$78,940	$22,000	$194,655
2021	−$20,339	$0	$51,797	−$24,383	−$2000	$53,663	$111,575	$40,000	$214,579
	Secure			Secure			Empowered		
1984	$143,355	$50,900	$721,452	$124,902	$44,000	$672,275	n/a	n/a	n/a
1989	$139,982	$68,000	$173,908	$123,995	$56,450	$168,432	n/a	n/a	n/a
1994	$178,613	$93,000	$309,810	$163,148	$77,000	$299,254	n/a	n/a	n/a
1999	$318,189	$124,250	$1,123,661	$294,149	$108,000	$1,082,001	n/a	n/a	n/a
2001	$386,792	$127,500	$2,223,323	$365,905	$110,474	$2,163,221	n/a	n/a	n/a
2004	$402,469	$105,425	$2,046,507	$374,199	$92,100	$1,974,291	n/a	n/a	n/a
2009	$165,866	$68,700	$357,777	$156,935	$60,500	$350,131	$301,016	$134,705	$490,409
2014	$165,013	$86,375	$203,937	$149,895	$78,000	$199,399	$365,802	$300,000	$291,497
2017	$276,036	$129,000	$531,686	$252,390	$109,000	$512,948	$598,932	$295,600	$831,205
2019	$332,431	$155,000	$688,830	$310,332	$140,000	$669,626	$883,134	$554,500	$1,285,047
2021	$419,819	$217,000	$563,303	$396,142	$194,000	$554,998	$850,214	$615,000	$775,279

$\bar{x}$ = mean; M = median; SD = standard deviation.

Figure 2 contains information on median net worth over time by asset poverty status and race. The patterns for both White and Black college graduates follow a very similar slope to the slope in the aggregate data in Figure 1. Therefore, we will not go into detail again here. However, while Black college graduates experience similar trends as White college graduates, Black college graduates have far less wealth regardless of the asset poverty measure used. As a result, the trends do not appear as sharp, particularly among the asset poor (see Table 3 & Table 4).

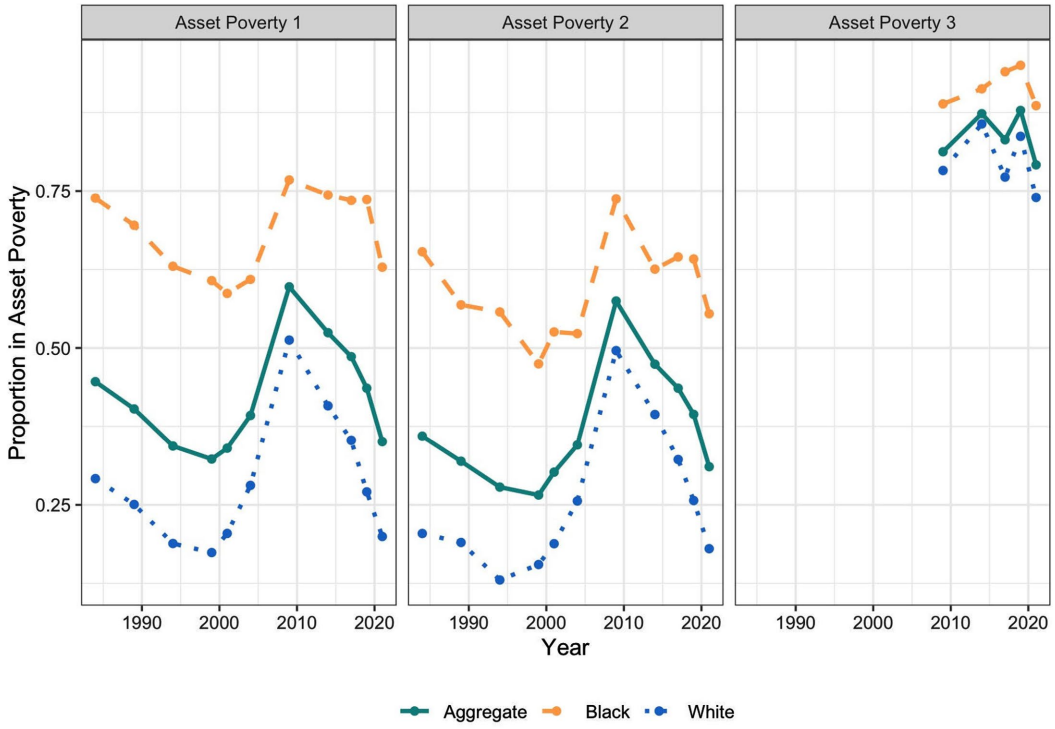

Figure 2. Median net worth over time by asset poverty status and race.

Table 3. Descriptive statistics for asset poor families by race.

White	Asset Poverty 1			Asset Poverty 2			Asset Poverty 3		
	Poor			Poor			Poor		
Year	$\bar{x}$	M	SD	$\bar{x}$	M	SD	$\bar{x}$	M	SD
1984	$370	$1500	$17,297	−$2537	$300	$19,931	n/a	n/a	n/a
1989	$2657	$3085	$10,046	−$50	$1800	$10,100	n/a	n/a	n/a
1994	−$331	$4775	$37,423	−$6476	$320	$43,891	n/a	n/a	n/a
1999	−$6559	$1705	$34,104	−$8762	$1000	$35,504	n/a	n/a	n/a
2001	−$1523	$2800	$18,012	−$2054	$1000	$18,718	n/a	n/a	n/a
2004	−$7556	−$910	$23,433	−$8517	−$2440	$24,891	n/a	n/a	n/a
2009	−$15,852	−$5000	$31,434	−$15,915	−$5600	$32,599	$6968	$3800	$45,626
2014	−$34,073	−$4750	$113,895	−$35,596	−$6375	$116,096	$33,680	$21,100	$117,021
2017	−$28,497	−$4150	$74,943	−$32,630	−$5500	$77,167	$58,955	$33,500	$120,088
2019	−$40,595	−$6750	$90,326	−$43,539	−$9700	$91,797	$120,269	$70,750	$232,713
2021	−$29,914	−$4600	$71,670	−$34,676	−$10,400	$73,866	$164,530	$104,000	$244,293
Black	**Asset Poverty 1**			**Asset Poverty 2**			**Asset Poverty 3**		
	Poor			**Poor**			**Poor**		
1984	$447	$0	$2574	$1229	$0	$3509	n/a	n/a	n/a
1989	$5	$0	$2666	$1445	$0	$4329	n/a	n/a	n/a
1994	−$885	$0	$9866	−$191	$0	$9522	n/a	n/a	n/a

Continued

1999	−$3027	$0	$20,542	−$250	$0	$19,001	n/a	n/a	n/a
2001	−$2185	$0	$12,645	−$1417	$0	$12,007	n/a	n/a	n/a
2004	−$5019	$0	$17,261	−$2784	$100	$17,089	n/a	n/a	n/a
2009	−$10,501	−$150	$24,062	−$9799	$0	$23,883	−$2616	$0	$30,296
2014	−$16,361	−$2250	$30,071	−$12,696	$0	$29,042	$2121	$325	$43,379
2017	−$20,928	$0	$55,898	−$17,314	$0	$53,266	$1150	$1000	$62,226
2019	−$18,956	$0	$36,647	−$15,203	$0	$35,665	$11,737	$1000	$69,336
2021	−$18,548	−$125	$37,003	−$15,157	$0	$36,009	$27,718	$2000	$93,776

$\bar{x}$ = mean; M = median; SD = standard deviation.

Table 4. Descriptive statistics for asset secure and empowered families by race.

White	Asset Poverty 1			Asset Poverty 2			Asset Poverty 3		
	Secure			Secure			Empowered		
Year	$\bar{x}$	M	SD	$\bar{x}$	M	SD	$\bar{x}$	M	SD
1984	$162,569	$56,200	$787,120	$145,473	$50,000	$744,011	n/a	n/a	n/a
1989	$158,094	$91,900	$184,987	$147,075	$76,650	$182,079	n/a	n/a	n/a
1994	$203,310	$112,500	$336,200	$190,512	$107,000	$328,149	n/a	n/a	n/a
1999	$380,826	$164,500	$1,267,040	$372,457	$155,500	$1,253,769	n/a	n/a	n/a
2001	$468,595	$172,000	$2,538,455	$459,190	$166,000	$2,513,361	n/a	n/a	n/a
2004	$503,311	$147,001	$2,369,608	$486,485	$141,750	$2,331,081	n/a	n/a	n/a
2009	$182,932	$68,400	$401,675	$176,405	$62,500	$396,452	$347,927	$156,500	$559,665
2014	$181,683	$92,104	$221,717	$176,759	$90,500	$220,596	$447,091	$350,175	$299,302
2017	$298,777	$162,250	$535,398	$285,917	$157,000	$526,428	$603,095	$341,250	$808,750
2019	$340,770	$176,200	$455,052	$334,654	$174,500	$452,933	$832,247	$708,000	$642,695
2021	$471,212	$258,900	$579,524	$460,370	$251,500	$576,806	$963,719	$700,274	$746,650
Black	**Asset Poverty 1**			**Asset Poverty 2**			**Asset Poverty 3**		
	Secure			Secure			Empowered		
1984	$44,697	$25,650	$46,363	$35,462	$20,000	$43,366	n/a	n/a	n/a
1989	$54,251	$35,850	$51,290	$40,635	$25,000	$47,997	n/a	n/a	n/a
1994	$74,841	$44,000	$103,522	$63,365	$38,000	$98,019	n/a	n/a	n/a
1999	$101,588	$63,700	$184,226	$78,831	$44,400	$164,463	n/a	n/a	n/a
2001	$106,469	$53,460	$174,306	$93,675	$47,743	$166,263	n/a	n/a	n/a
2004	$96,191	$66,000	$139,333	$81,085	$46,000	$130,454	n/a	n/a	n/a
2009	$105,899	$62,000	$140,041	$94,522	$50,500	$135,363	$174,650	$93,500	$178,117
2014	$94,770	$69,655	$99,727	$68,912	$33,625	$92,487	$159,135	$117,250	$148,098
2017	$153,672	$59,000	$430,569	$117,451	$40,395	$377,334	$459,775	$130,000	$868,306
2019	$307,094	$91,000	$1,354,959	$230,884	$50,000	$1,172,659	$1,237,478	$172,392	$3,131,991
2021	$225,785	$107,220	$468,826	$190,243	$88,000	$435,479	$428,050	$169,500	$792,671

$\bar{x}$ = mean; M = median; SD = standard deviation.

4.3. Asset Poverty Rates by Race and Year (1984-2021)

Table 5 provides information on the asset poverty rate using the three asset poverty variables from 1984 to 2021. The data indicate that both asset poverty variables tell us that there is a significant Black/White wealth gap and because the sample only includes college graduates that having a college degree does not eliminate that gap. For example, using Asset Poverty 1, in 2021, 63% of Black graduates were asset poor whereases only 20% of White college graduates were poor. In 2021 college graduates are 37 to 42 years of age. So at the time when they should be launching into being a financially established adult, most Black college graduates do not have enough net worth to live for three months at the poverty line. However, in the case of the asset empowered measure, while there is still a gap that favors White college graduates (74% of Whites; 89% of Blacks), the gap is much narrower. This suggests that wealth is fairly concentrated at the top, regardless of race. That is, few people have accumulated enough wealth to be characterized as on course to retire comfortably.

Table 5. Asset poverty rates by race and year, 1984-2021 (figures are in percent and rounded).

Year	Asset Poverty 1			Asset Poverty 2			Asset Poverty 3		
	All	White	Black	All	White	Black	All	White	Black
1984	45	29	74	36	20	65	n/a	n/a	n/a
1989	40	25	70	32	19	57	n/a	n/a	n/a
1994	34	19	63	28	13	56	n/a	n/a	n/a
1999	32	18	61	27	16	47	n/a	n/a	n/a
2001	34	21	59	30	19	53	n/a	n/a	n/a
2004	39	28	61	35	26	52	n/a	n/a	n/a
2009	60	51	77	58	50	74	81	78	89
2014	52	41	74	47	39	63	75	70	85
2017	49	35	74	44	32	65	83	77	94
2019	44	27	74	39	26	64	88	84	95
2021	35	20	63	31	18	55	79	74	89

Figure 3 provides information on economic mobility in America. It does so by using the three asset measures. Remember being asset poor is to live at a survival standard, not being asset poor for Asset Poverty 1 and 2 is to live at a security standard, and being not asset poor for Asset Poverty 3 is to live at a growth standard. So, while there is a lot of additional information conveyed in Figure 3, to save space, we will focus on movement between different standards of living. Further, given that Asset Poverty 1 and 2 are very similar in how they are measured, here we will only focus on results from Asset Poverty 1 and 3.

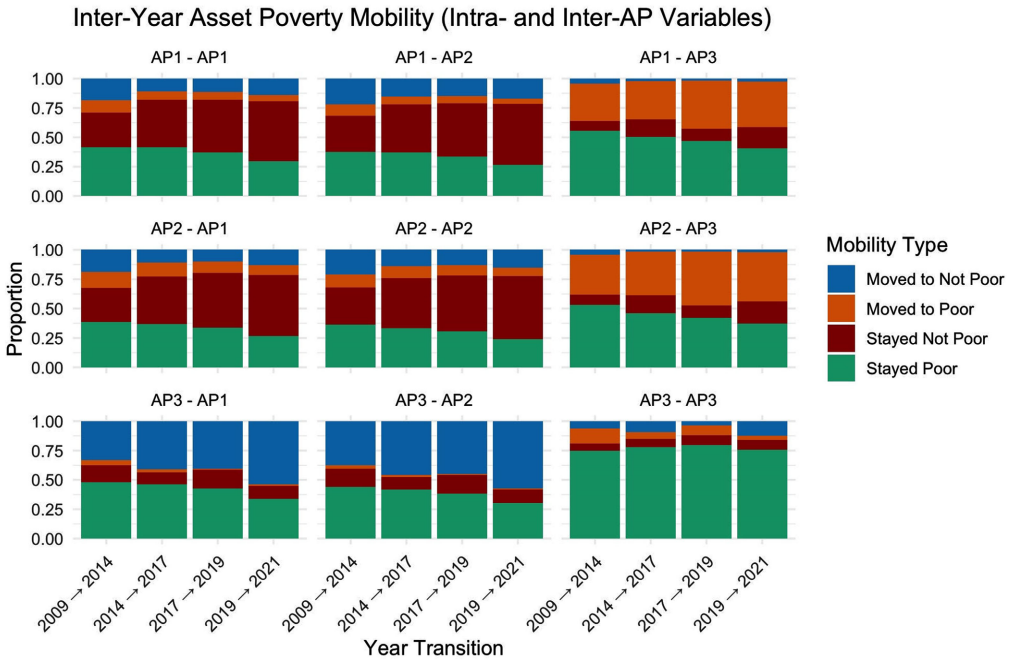

Figure 3. Economic mobility trends using asset poverty measures. Moved to Not Poor. Two categories are: previously not poor and moved to poor; Moved to Poor. Two categories are: previously poor and moved to not poor; Stayed Not Poor. Two categories are: previously not poor and stayed not poor; Stayed Poor. Two categories: previously poor and still poor.

4.3.1. Upward Mobility

Upward mobility among college graduates is measured using the Moved to Not Poor variable which has the following two categories, previously asset poor and not asset poor (i.e., moved from being asset poor or living at a survival standard, to being asset secure). Using Asset Poverty 1, between 2009-2014 about 18% moved from living at a survival standard to living at a security standard. Mobility was even less when considering moving from living at a survival standard to a growth standard, about 4%. From 2014-2017 approximately 11% moved to a security standard, and almost 2% moved to a growth standard. There is no change from 2017 to 2019. From 2019-2021, about 14% moved to a security standard, and nearly 3% to a growth standard. So, in the case of moving from asset poor to asset secure, mobility was at its highest from 2009-2014 then drops between 2014-2017, remains there until 2019-2021 when it rose again but did not get back to its high in 2009-2014. In the case of the asset poor moving to an asset growth standard, there is just very little mobility across all years.

4.3.2. Downward Mobility

Downward mobility is measured using the Moved to Poor variable. It has the following two categories previously not poor and moved to poor. Using Asset Poverty 1, we find that in 2009-2014 about 11% moved from living in asset security to living at a survival standard, 2014-2017 about 7%; 2017-2019 about 6%; 2019-2021 about 5%. Using Asset Poverty 3, data indicate that very few who are asset empowered and living at a growth standard fall into asset poverty. Among the asset

empowered, in 2009-2014 only 13% become poor, 2014-2017 about 5%; 2017-2019 about 8%; 2019-2021 about 4%.

4.3.3. Status Quo Is the Norm: Stuck on the Economic Ladder

Using Asset Poverty 1, about 41% of the asset poor stayed living at a survival standard between 2009-2014; 2014-2017 about 41%; 2017-2019 about 37%; 2019-2021 about 30%. Among college graduates who stayed not asset poor between 2009-2014 about 29% stayed living at a security standard; 2014-2017 about 40%; 2017-2019 about 45%; 2019-2021 about 51%. In the case of those who stayed asset poor, using Asset Poverty 3, between 2009-2014 about 75% stayed living at a less than the growth standard (i.e., asset poor by the Asset Poverty 3 definition); 2014-2017 about 78%; 2017-2019 about 80%; 2019-2021 about 76%.

Next, results are separated out by the three asset poverty measures. Each contains results for panel logistic regression, marginal effects, and survival analysis. The two asset poverty measures and the asset empowerment measure are the outcomes of interest in this section.

4.4. Panel Logistic Regression Results

4.4.1. Asset Poverty 1

Race. White college graduates have nearly twice the odds of being asset secure than Black college graduates (OR = 1.878, 95% CI [1.006, 3.507]) (Table 6).

Table 6. Asset poverty 1 panel logistic regression results.

Covariates	*B*	OR	CI	CI
(Intercept)	0.474	---	0.166	15.555
Household (Parent/Head's Information)				
Education Level (4-years or more)				
High School or Less	0.293	---	0.780	2.303
Some College	−0.137	---	0.525	1.446
Not Married (vs, Married)	−1.066	---	0.144	0.826
Unemployed (vs. Employed)	−0.247	---	0.462	1.322
Income	−0.028	---	0.833	1.134
Household Size	−0.098	---	0.744	1.105
College Graduate's Gender				
Male (vs. Male)	0.057	---	0.702	1.597
Variables of Interest (College Graduate's Information)				
White (vs. Black)	0.630	1.878*	1.006	3.507
Financial Literacy	0.181	---	0.774	1.856
Household's Amount of Student Loans	0.000	1.000***	1.000	1.000

Continued

Wealth Variables				
Birth Wealth (Parents' Household Wealth)	0.011	---	0.981	1.042
Enrollment Wealth (Parents' Household Wealth)	0.046	1.047*	1.010	1.086
Graduation Wealth (Graduates' Household Wealth)	0.074	1.077***	1.059	1.095

PSID = Panel Study of Income Dynamics; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$. Asset Poverty 1 is defined as residing in a household that lacks sufficient assets (net wealth) to remain above the official poverty line for three months (Haveman & Wolff, 2004).

Enrollment Wealth. For every unit increase in IHS transformed enrollment wealth a graduate has, the likelihood of the amount of net worth they have making them asset secure increases. Holding other covariates constant, every additional $1 in enrollment wealth a graduate has is associated with a 3% increase in the odds they are asset secure. So, as little as a $1 (4%), $500 (38%), $1000 (42%), $5000 (53%), or $10,000 (58%) increase in enrollment wealth raises the odds college age graduates become asset secure by middle age. To understand how rapid a change this is from giving someone $1 to $500, it is 34% odds increase; from $500 to $5000, it is 15% odds increase. Therefore, having $500 put aside for when a graduate reaches college age can greatly impact on the odds that they become asset secure by the time they are early middle age.

A visual representation of the impact of enrollment wealth can be seen in the sharp rise in the odds curve in Figure 4.

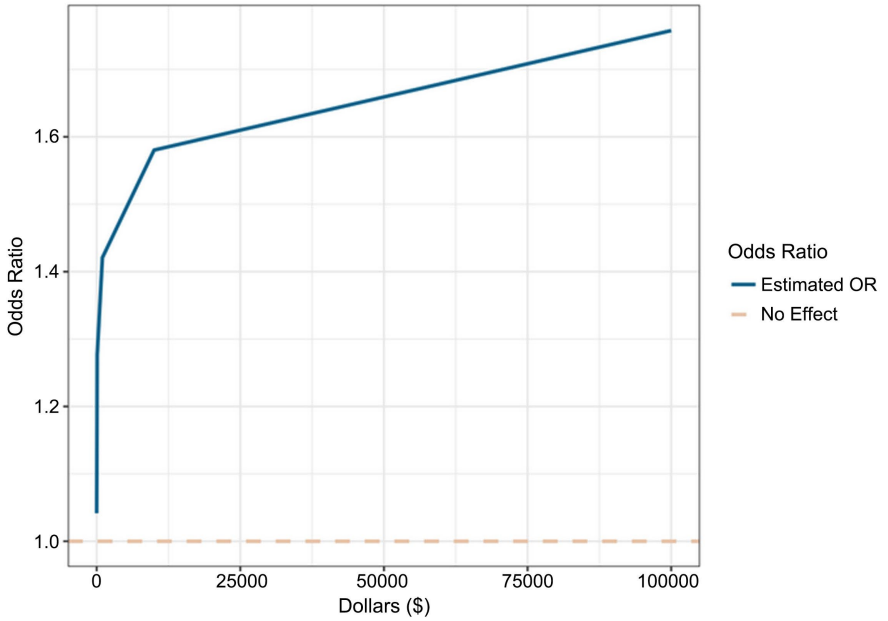

Figure 4. Impact of college enrollment wealth by dollar value on the odds of becoming asset secure as measured by asset poverty 1.

Graduation Wealth. For every unit increase in IHS transformed graduation wealth, a graduate has, the likelihood of the amount of net worth they have making them asset secure rises. Thus, holding other covariates constant, for every additional $1 in graduation wealth is associated with over 6% increase in the odds of having a college graduate's net worth being high enough for them to be asset secure. However, as little as a $1 (6%), $500 (67%), $1000 (76%), $5000 (98%), or $10,000 (over 2 times more likely) increase in graduation wealth is very important for increasing the odds a college graduate will become asset secure by the time they reach middle age. To understand how swift a change this is from giving someone $1 to $500, it is 61% odds increase; from $500 to $5000, it is 31% odds increase.

The importance of having graduation wealth can be seen in how abrupt the rise in the odds curve is (see Figure 5).

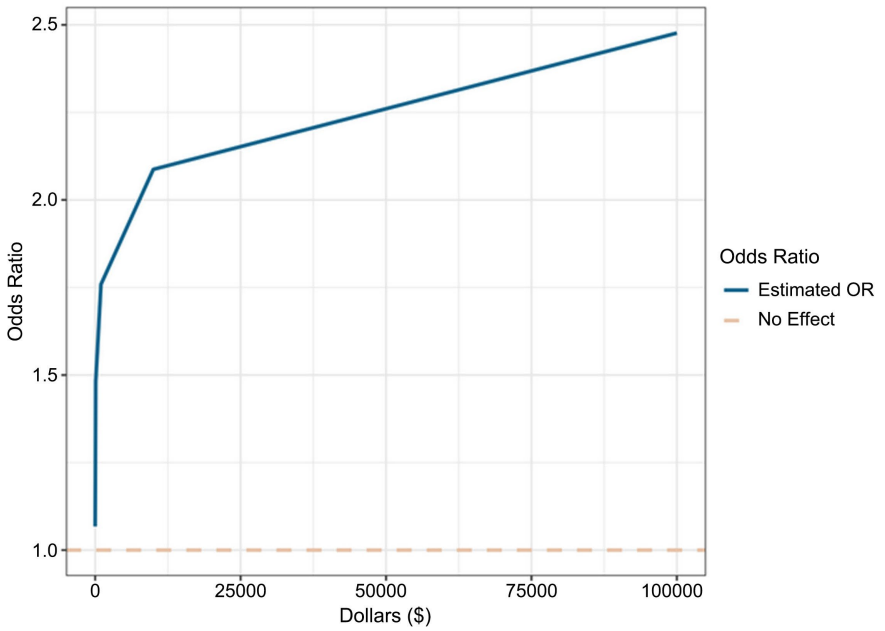

Figure 5. Impact of college graduation wealth by dollar value on the odds of becoming asset secure as measured by asset poverty 1.

4.4.2. Asset Poverty 2

Race. White college graduates have just over twice the odds of being asset secure than Black college graduates (OR = 2.104, 95% CI [1.149, 3.853]) (Table 7).

Table 7. Asset poverty 2 panel logistic regression results.

Covariates	*B*	OR	CI	CI
(Intercept)	1.178	---	0.432	24.450
Household (Parent/Head's Information)				
Education Level (4-years or more)				
High School or Less	0.224	---	0.759	2.061

Continued

Some College	−0.249	---	0.478	1.272
Not Married (vs. Married)	−1.136	0.321**	0.152	0.678
Unemployed (vs. Employed)	−0.232	---	0.457	1.377
Income	−0.090	---	0.805	1.037
Household Size	−0.066	---	0.772	1.136
College Graduate				
Male (vs. Female)	0.018	---	0.676	1.535
Variables of Interest (College Graduate's Information)				
White (vs. Black)	0.744	2.104*	1.149	3.853
Financial Literacy	0.098	---	0.721	1.688
Household's Amount of Student Loans	0.000	1.000***	1.000	1.000
Wealth Variables				
Birth Wealth (Parents' Household Wealth)	0.010	---	0.098	1.040
Enrollment Wealth (Parents' Household Wealth)	0.044	1.045*	1.006	1.084
Graduation Wealth (Graduates' Household Wealth)	0.082	1.085***	1.068	1.104

PSID = Panel Study of Income Dynamics; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$. Asset Poverty 2 is defined as residing in a household that does not possess wealth equivalent to three months of total family income (Wolff, 2017).

Enrollment Wealth. For every unit increase in IHS transformed enrollment wealth a graduate has, the likelihood of the amount of net worth they have making them asset secure increases. For every additional $1 in enrollment wealth a graduate has, the graduate experiences a 4% increase in the odds they are asset secure. So, as little as a $1 (4%), $500 (35%), $1000 (39%), $5000 (49%), or $10,000 (54%) increase in enrollment wealth increases the odds a college graduate becomes asset secure by middle age. So, giving someone $1 to $500, it is 33% odds increase; from $500 to $5000, it is 14% odds increase.

A visual representation of the impact of enrollment wealth can be seen in the sharp rise in the odds curve (see **Figure 6**).

Graduation Wealth. For every unit increase in IHS transformed graduation wealth, a graduate has, the likelihood of the amount of net worth they have making them asset secure increases. Holding other covariates constant, for every additional $1 in post-college wealth a graduate has is associated with about an 8% increase in the odds of having their net worth be at a level consistent with being asset secure. However, as little as a $1 (about 8%), $500 (76%), $1000 (87%), $5000 (113%), or $10,000 (125%) increase in graduation wealth is very important for increasing the odds a college graduate becomes asset secure by middle age. The

importance of having graduation wealth can be seen in the sharp rise in the odds curve (see Figure 7).

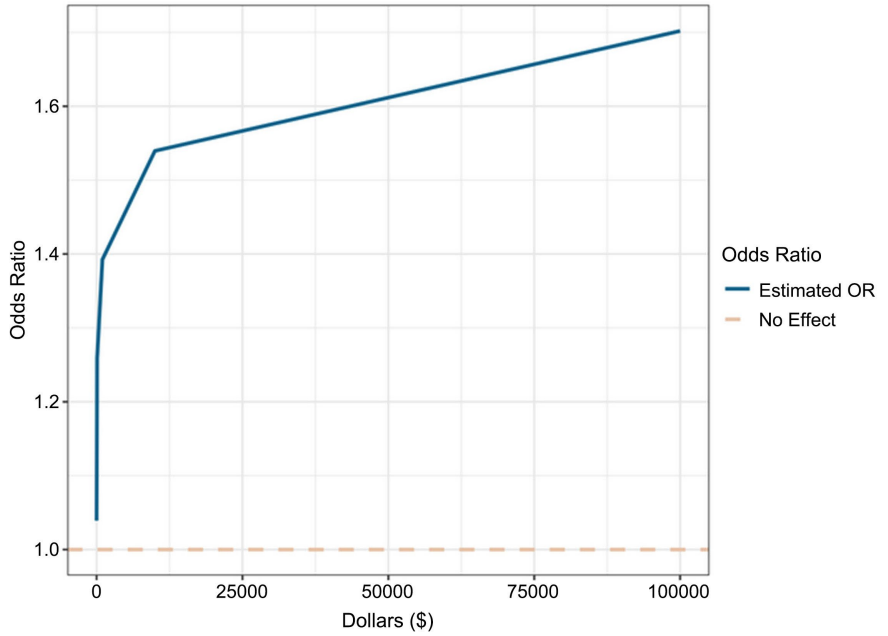

Figure 6. Impact of college enrollment wealth by dollar value on the odds of becoming asset secure as measured by asset poverty 2.

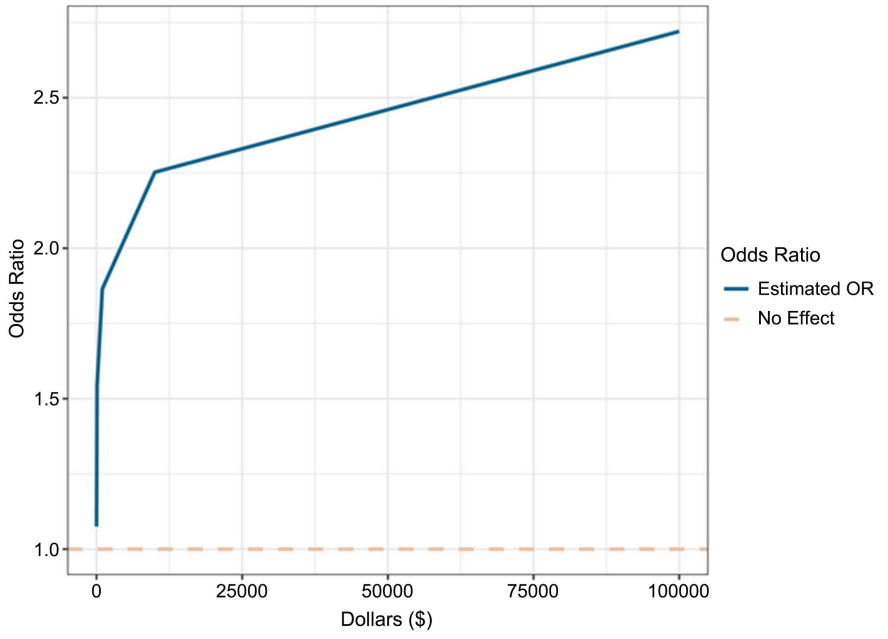

Figure 7. Impact of college graduation wealth by dollar value on the odds of becoming asset secure as measured by asset poverty 2.

4.4.3. Asset Poverty 3

Race. White college graduates have more than twice the odds of being asset secure than Black college graduates (OR = 2.191, 95% CI [1.016, 4.726]) (Table 8).

Table 8. Asset poverty 3 panel logistic regression results.

Covariates	*B*	OR	CI	CI
(Intercept)	−1.862	---	0.014	1.668
Household (Parent/Head's Information)				
Education Level (4-years or more)				
High School or Less	−0.234	---	0.425	1.473
Some College	0.132	---	0.667	1.952
Not Married (vs. Married)	0.026	---	0.437	2.414
Unemployed (vs. Employed)	−0.445	---	0.302	1.358
Income	−0.094	---	0.778	1.064
Household Size	−0.029	---	1.016	4.726
College Graduate				
Male (vs. Female)	−0.060	---	0.588	1.509
Variables of Interest (College Graduate's Information)				
White (vs. Black)	0.785	2.191*	1.016	4.726
Financial Literacy	−0.015	---	0.613	1.581
Household's Amount of Student Loans	0.000	---	1.000	1.000
Wealth Variables				
Birth Wealth (Parents' Household Wealth)	0.023	---	0.981	1.067
Enrollment Wealth (Parents' Household Wealth)	0.062	1.064*	1.004	1.126
Graduation Wealth (Graduates' Household Wealth)	0.056	1.058***	1.030	1.086

PSID = Panel Study of Income Dynamics; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$. Asset Poverty 3 is the odds of hitting each age-based net worth milestone, treating each checkpoint (e.g., 1× income by age 35, 2× by 40, etc.) as a binary outcome and accounting for within-person clustering over time.

Enrollment Wealth. For every unit increase in IHS transformed enrollment wealth a graduate has, the likelihood of the amount of net worth they have making them asset empowered increases. Holding other covariates constant, every additional $1 in enrollment wealth a graduate has is associated with about a 6% increase in the odds they are asset empowered. So, as little as a $1 (6%), $500 (53%), $1000 (60%) $5000 (77%), or $10,000 (84%) increase in enrollment wealth increases the odds a college graduate becomes asset empowered by middle age. To understand the nature of this change, giving someone $1 to $500, it is 47% odds increase; from $500 to $5000, it is 23% odds increase.

A visual representation of the impact of enrollment wealth can be seen in Figure 8.

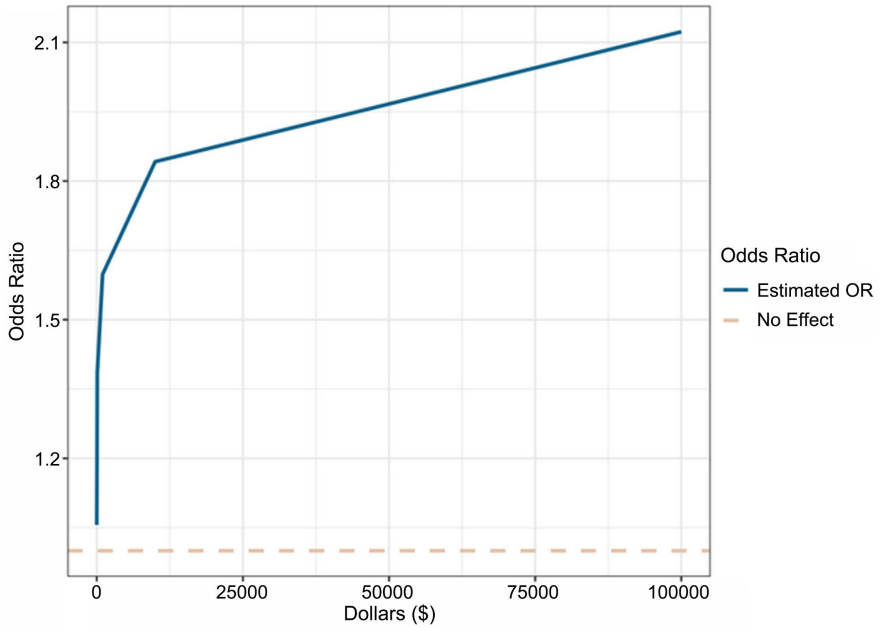

Figure 8. Impact of college enrollment wealth by dollar value on the odds of becoming asset secure as measured by asset poverty 3.

Graduation Wealth. For every unit increase in IHS transformed graduation wealth, a graduate has, the likelihood of the amount of net worth they have making them asset empowered increases. Thus, holding other covariates constant, every additional $1 in post-college wealth a graduate has is associated with about a 5% increase in the odds they are asset empowered. However, as little as a $1 (about 5%), $500 (48%), $1000 (53%), $5000 (68%), or $10,000 (75%) increase in graduation wealth is very important for increasing odds a college graduate becomes asset empowered by middle age. To understand the nature of this change, giving someone $1 to $500, it is 43% odds increase; from $500 to $5000, it is 20% odds increase.

The importance of having graduation wealth can be seen in how steep the rise in the odds curve is (see Figure 9).

4.5. Survival Analysis

4.5.1. Kaplan-Meier Curves

Asset Poverty 1

Race. Figure 10 shows the Kaplan-Meier survival estimates of the time it takes Black and White college graduates to become asset secure, over the study period. The year 2009 marks the beginning of the study (time = 0 years). The median survival time for White individuals is approximately 6 years, whereas Black individuals take 9 years to reach the same level. This indicates a substantial survival advantage for White individuals. Specifically, only 50% of White individuals are at risk of not being asset secure 6 years after college graduation. In contrast, at the end of the study (13 years post-graduation), about 38% of Black individuals remain at risk, compared to less than 5% for White individuals at the end of 13 years.

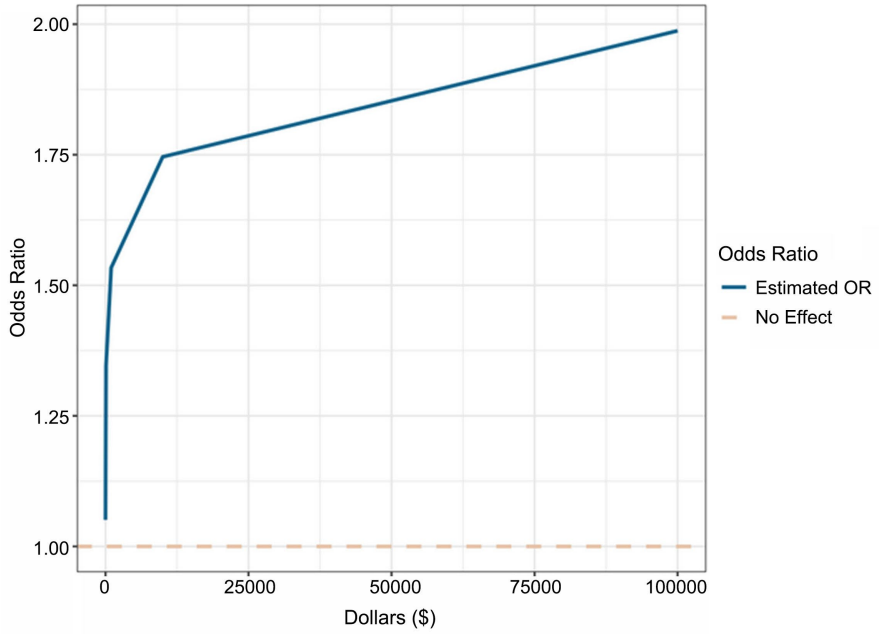

Figure 9. Impact of college graduation wealth by dollar value on the odds of becoming asset secure as measured by asset poverty 3.

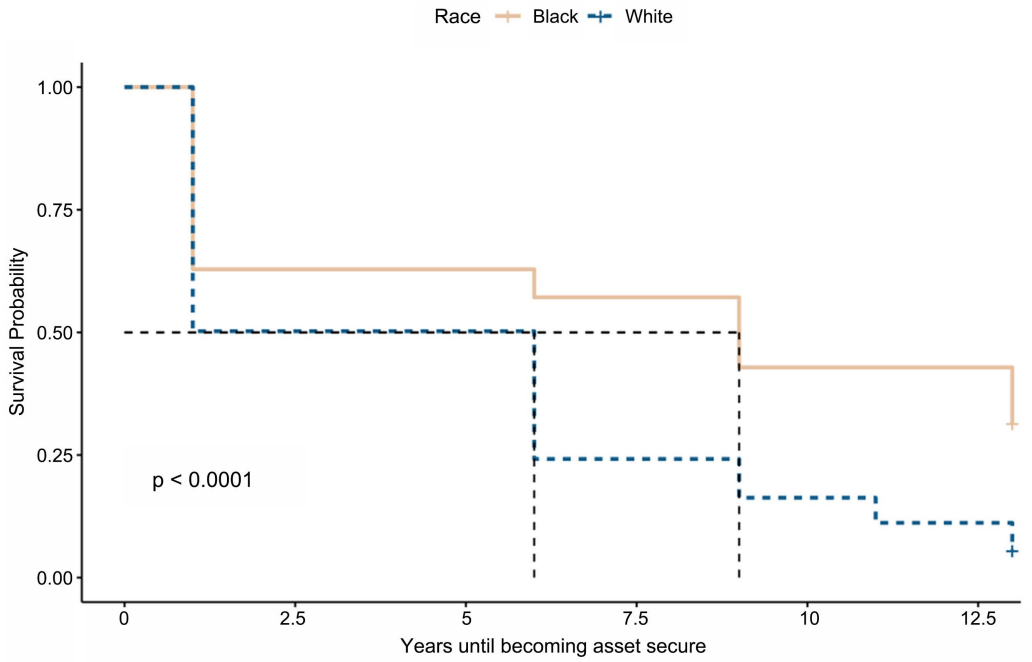

Figure 10. Kaplan-Meier survival curve estimates of the time it college graduates to become asset secure as measured by asset poverty 1, over the study period from 2009 to 2021 stratified by race. The year 2009 marks the beginning of the study (time = 0 years).

Student Loan Class (less than 10k ~ low debt and vice versa). Figure 11 shows Kaplan-Meier survival estimates for the time it takes college graduates to become asset secure, stratified by student loan burden. Households are categorized based on their 2011 student loan amounts: those with less than $10,000 are

classified as low debt, and those with $10,000 or more as high debt. The survival curves indicate that individuals with lower student debt become asset secure more rapidly than their high-debt counterparts. Just one year post-graduation, 50% of low-debt individuals have become asset secure, whereas it takes approximately six years for the same proportion of high-debt individuals to do so. By the end of the study period—twelve and a half years after graduation—less than 1% of low-debt individuals remain at risk of not becoming asset secure, compared to 18% among the high-debt group.

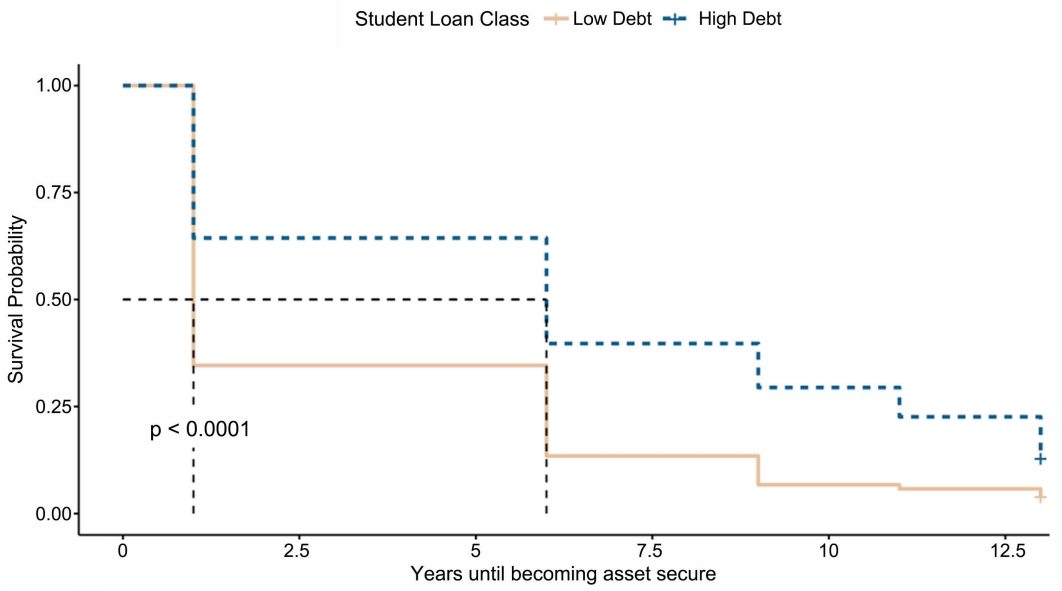

Figure 11. Kaplan-Meier survival curve estimates of the time it college graduates to become asset secure as measured by asset poverty 1, over the study period from 2009 to 2021, stratified by loan class. Households are categorized based on their 2011 student loan amounts: those with debt less than $10,000 are classified as low debt, and those with debt $10,000 or more as high debt. The year 2009 marks the start of the observation period (time = 0 years).

Asset Poverty 2

Race. The median survival time for White individuals is approximately 1 year, whereas Black individuals take about 9 years to become asset secure (see **Figure 12**). Specifically, only 50% of White individuals are at risk of not being asset secure a year after college graduation. At the end of the study (13 years post-graduation), about 30% of Black individuals remain at risk of not becoming asset secured, compared to less than 1% for White individuals at the end of 13 years.

Student Loan Class (less than 10k ~ low debt and vice versa). Mirroring the pattern observed in Asset Poverty 1, half of all low-debt individuals achieve asset security within one year of graduation, while their high-debt counterparts take nearly six years to reach the same milestone (see **Figure 13**). By twelve and a half years post-graduation—the end of the study period—fewer than 1% of low-debt individuals remain asset insecure, compared to approximately 17% of those with high debt.

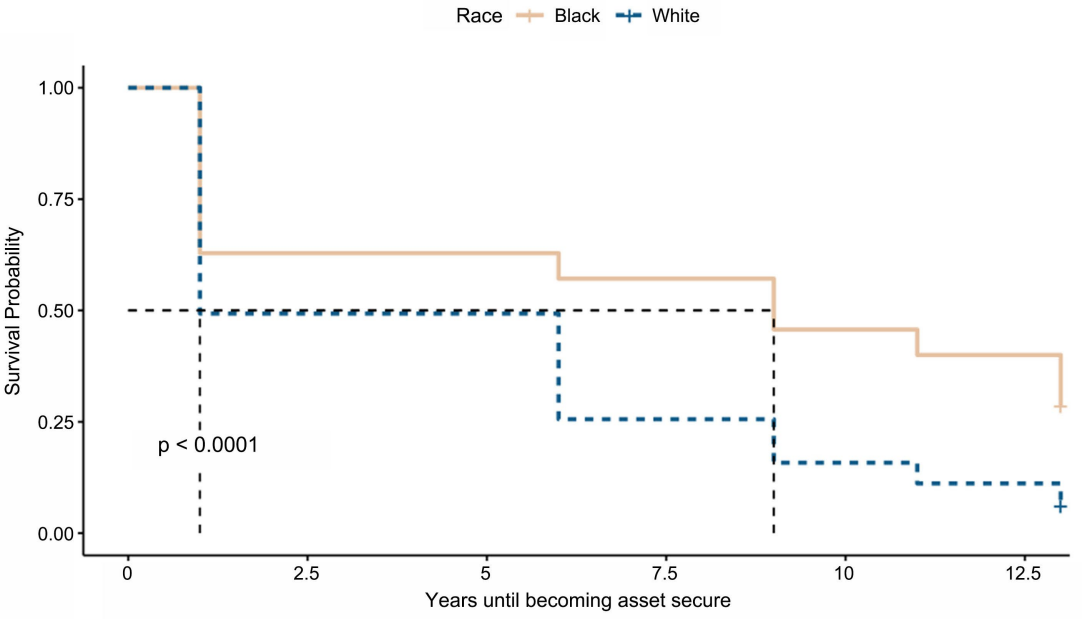

Figure 12. Kaplan-Meier survival curve estimates of the time it college graduates to become asset secure as measured by asset poverty 2, over the study period from 2009 to 2021 stratified by race. The year 2009 marks the beginning of the study (time = 0 years).

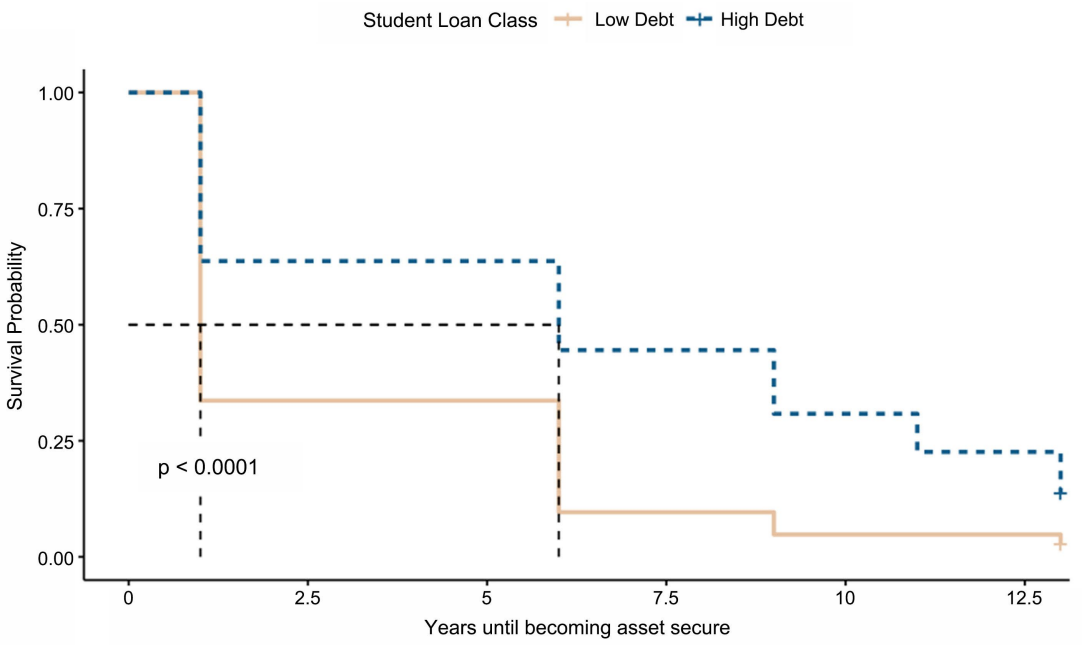

Figure 13. Kaplan-Meier survival curve estimates of the time it college graduates to become asset secure as measured by asset poverty 2, over the study period from 2009 to 2021, stratified by loan class. Households are categorized based on their 2011 student loan amounts: those with debt less than $10,000 are classified as low debt, and those with debt $10,000 or more as high debt. The year 2009 marks the start of the observation period (time = 0 years).

Asset Poverty 3

Race. In sharp contrast to Asset Poverty 1 and 2, the trajectory toward becoming asset empowered is markedly prolonged for both White and Black college

graduates. The median time to asset empowerment for White individuals is approximately 13 years—nearly the full duration of the study—while Black individuals do not reach the median survival threshold by the study's end, when they should be entering the established adulthood stage (ages 37 to 42) (see Figure 14). That is, thirteen years post-graduation, only half of White individuals remain at risk of not being asset empowered, whereas just 25% of Black individuals have achieved asset empowerment. Although the racial disparity is statistically significant according to the log-rank test, the overall pace is slow across both groups, highlighting the extended time frame required post-graduation to become capable of producing wealth at a level that would allow them to reach their financial goals.

Student Loan Class (less than 10 k ~ low debt and vice versa). Like race, a similar pattern emerges when comparing individuals by student debt levels. It takes approximately 10 years post-graduation for 50% (one-half) of low-debt individuals to achieve asset empowerment. In contrast, those with high levels of student debt never reach the median threshold within the study period (see Figure 15). By twelve and a half years after graduation, about 40% of low-debt individuals remain at risk of not being asset empowered. However, among high-debt individuals, just 40% have attained asset empowerment, leaving the majority—60%—still at risk. These findings underscore the persistent burden of student debt in delaying graduate students' capability of producing wealth at a level that would allow them to reach their financial goals.

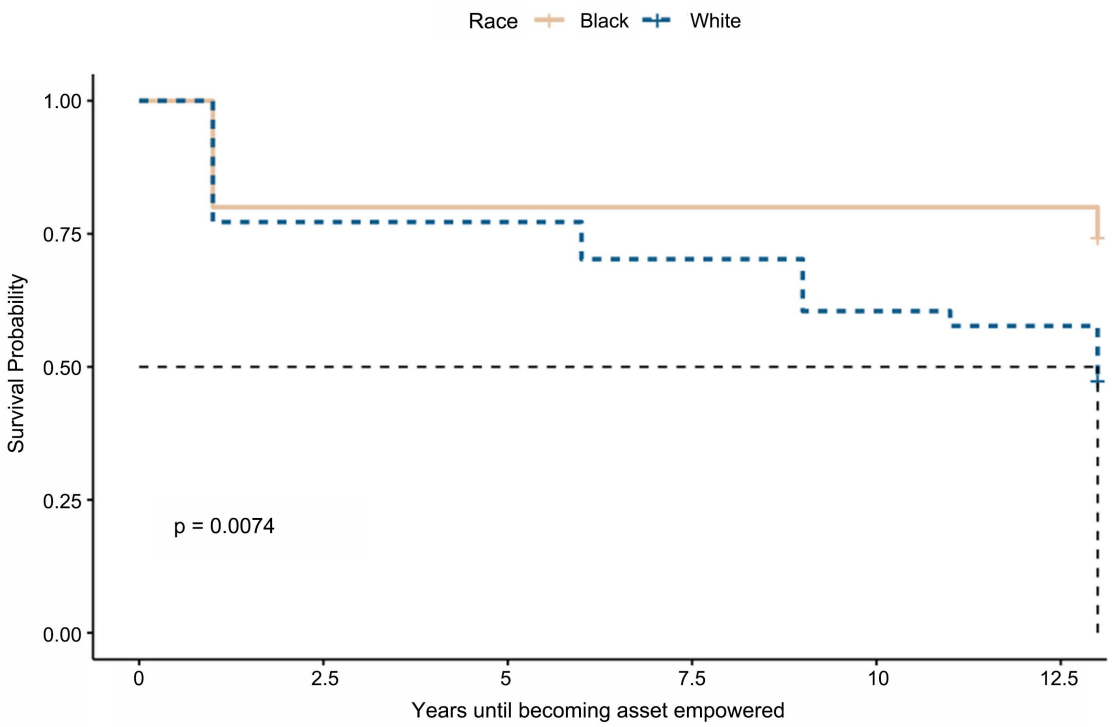

Figure 14. Kaplan-Meier survival curve estimates of the time it college graduates to become asset empowered as measured by asset poverty 3, over the study period from 2009 to 2021 stratified by race. The year 2009 marks the beginning of the study (time = 0 years).

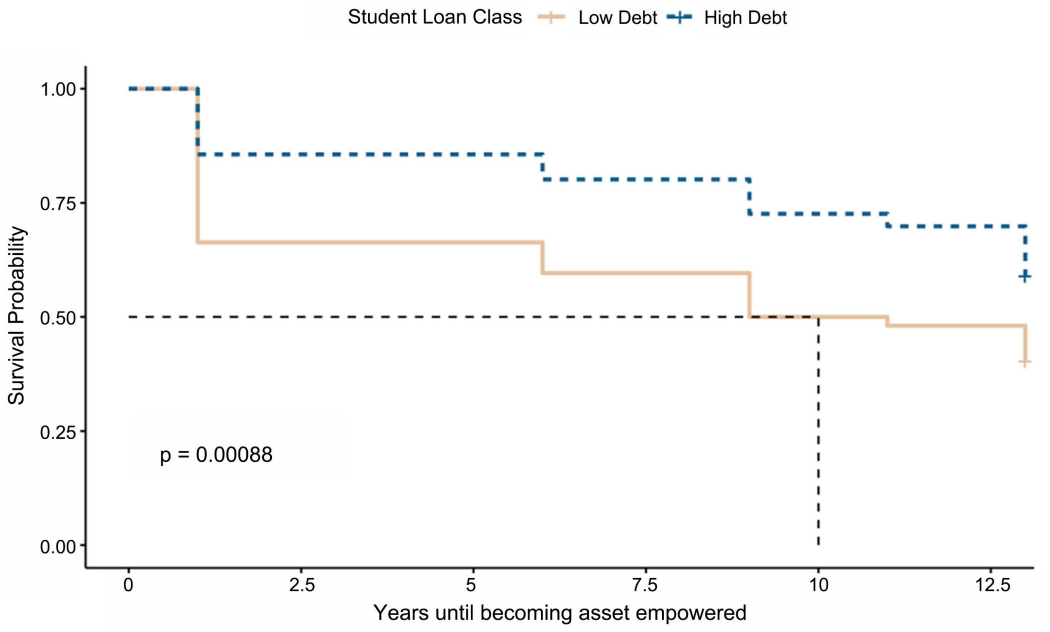

Figure 15. Kaplan-Meier survival curve estimates of the time it college graduates to become asset empowered as measured by asset poverty 3, over the study period from 2009 to 2021, stratified by loan class. Households are categorized based on their 2011 student loan amounts: those with debt less than $10,000 are classified as low debt, and those with debt $10,000 or more as high debt. The year 2009 marks the start of the observation period (time = 0 years).

4.5.2. Cox-Proportional Hazard Model

Asset Poverty 1

Graduation Wealth. IHS transformed graduation wealth is associated with an increased hazard of becoming asset secure. However, this covariate fails the Cox proportional hazards assumption, necessitating the incorporation of time-varying measures to allow its association with the likelihood of becoming asset secure to vary over time. With this adjustment, graduation wealth still shows a strong relationship with an increased risk of being asset secure. A higher value of IHS transformed graduation wealth significantly increases the hazard of being asset secure shortly after college graduation, with about a 47% (see Figure 16) increase right after college. However, this effect diminishes over time and reverses towards the end of the study (see Figure 16, Table 9).

Table 9. Asset Poverty 1 survival analysis, Cox-proportional hazard model.

Covariates	*B*	HR	CI	CI
Household (Parent/Head's Information)				
Education Level (4-years or more)				
High School or Less	0.053	---	0.740	1.503
Some College	0.018	---	0.731	1.419
Not Married (vs. Married)	−0.470	---	0300	1.302
Unemployed (vs. Employed)	0.026	---	0.656	1.605

Continued

Income	0.015	---	0.805	1.279
Household Size	−0.078	---	0.800	1.069
College Graduate's Gender				
Male (vs. Male)	0.060	---	0.804	1.402
Variables of Interest (College Graduate's Information)				
White (vs. Black)	0.347	---	0.839	2.386
Financial Literacy	0.093	---	0.811	1.484
Household's Amount of Student Loans	0.000	1.000**	1.000	1.000
Wealth Variables				
Birth Wealth (Parents' Household Wealth)	0.001	---	0.974	1.028
Enrollment Wealth (Parents' Household Wealth)	0.024	---	0.996	1.054
Graduation Wealth (Graduates' Household Wealth)	0.387	1.473***	1.332	1.629

PSID = Panel Study of Income Dynamics; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$. Asset Poverty 1 is defined as residing in a household that lacks sufficient assets (net wealth) to remain above the official poverty line for three months (Haveman & Wolff, 2004).

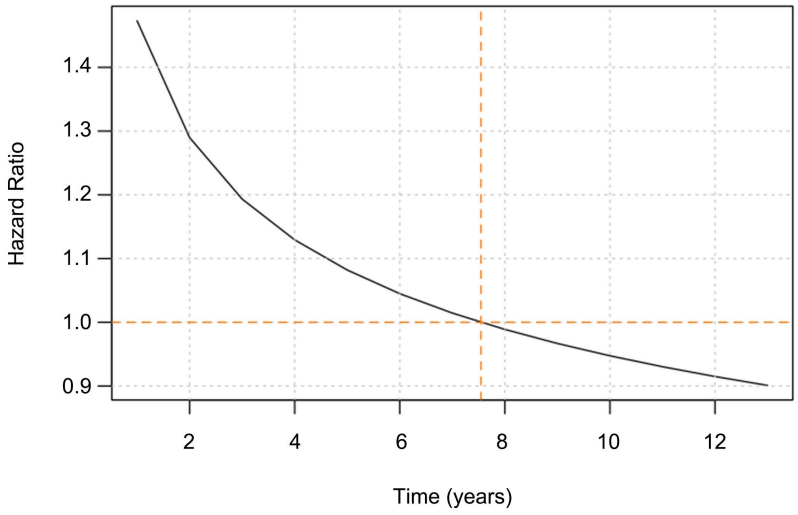

Figure 16. Time-varying hazard ratio estimates for IHS-transformed graduation wealth, showing its changing effect on becoming asset secured over time as measured by asset poverty 1.

To better understand the impact of investing real dollar amounts in graduation wealth, we present corresponding dollar-based hazard ratios in Figure 17. For example, providing a college graduate with an additional $1000 in graduation wealth increases their hazard (instantaneous rate) of being asset secure by a factor of

about 24 within the first year after graduation. By year five, this effect declines to a factor of just below 2. This suggests that not only is college graduation wealth important in increasing the hazard of being asset secure for college graduates (or launching into established adulthood), but also that providing this wealth early matters significantly more than doing so later. Figure 15 also illustrates the effects of $1, $500, $5000, and $10,000 increases in graduation wealth on a college graduate's rate of becoming asset secure (Table 10).

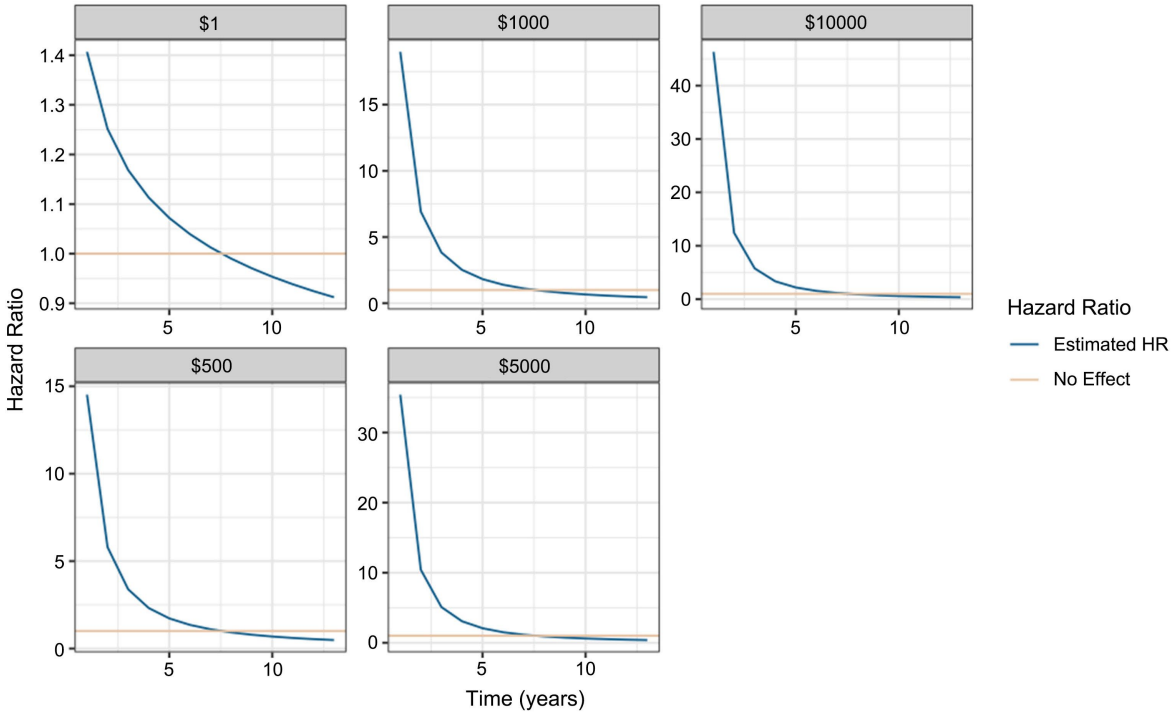

Figure 17. Time-varying hazard ratios associated with different dollar amounts of graduation wealth, showing how early graduation wealth influences the likelihood of becoming asset secured as measured by asset poverty 1.

Table 10. Asset poverty 2 survival analysis, Cox-proportional hazard model.

Covariates	*B*	HR	CI	CI
Household (Parent/Head's Information)				
Education Level (4-years or more)				
High School or Less	−0.071	---	0.647	1.340
Some College	−0.074	---	0.667	1.293
Not Married (vs. Married)	−0.589	---	0.270	1.143
Unemployed (vs. Employed)	−0.094	---	0578	1.433
Income	−0.099	---	0.747	1.097
Household Size	−0.079	---	0.799	1.069
College Graduate				
Male (vs. Female)	0.093	---	0.820	1.470

Continued

Variables of Interest (College Graduate's Information)				
White (vs. Black)	0.380	---	0882	2.426
Financial Literacy	0.000	---	0.740	1.350
Household's Amount of Student Loans	0.000	1.000**	1.000	1.000
Wealth Variables				
Birth Wealth (Parents' Household Wealth)	0.005	---	0.978	1.032
Enrollment Wealth (Parents' Household Wealth)	0.010	---	0.983	1.037
Graduation Wealth (Graduates' Household Wealth)	0.423	1.527***	1.372	1.699

PSID = Panel Study of Income Dynamics; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$. Asset Poverty 2 is defined as residing in a household that does not possess wealth equivalent to three months of total family income (Wolff, 2017).

Asset Poverty 2

Graduation Wealth. As with Asset Poverty 1, IHS transformed graduation wealth is associated with an increased hazard of being asset secure. Incorporation of time-varying measures to allow its association with the hazard of becoming asset secure to vary over time. With this adjustment, graduation wealth still shows a strong relationship with an increased risk of becoming asset secure. A higher value of IHS transformed graduation wealth significantly increases the hazard of being asset secure shortly after college graduation, with over 52% (see Figure 18) increase right after college. However, this effect diminishes over time and reverses towards the end of the study (see Figure 18).

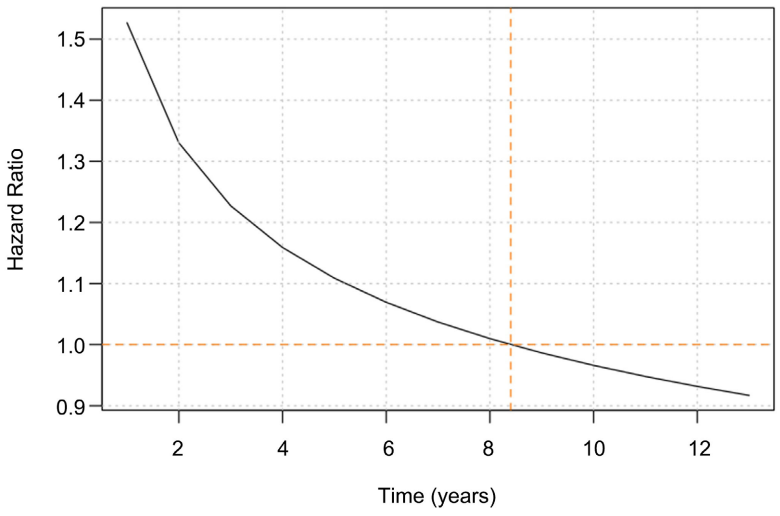

Figure 18. Time-varying hazard ratio estimates for IHS-transformed graduation wealth, showing its changing effect on becoming asset secured over time as measured by asset poverty 2.

To better understand the impact of investing real dollar amounts in graduation wealth, we present corresponding dollar-based hazard ratios in Figure 18. For example, providing a college graduate with an additional $1000 in graduation wealth increases their hazard of becoming asset secure by a factor of nearly 25 within the first year after graduation. By year five, this effect declines to a factor of just over 2. This suggests that not only is college completion wealth important in increasing the hazard of becoming asset secure for college graduates, but also that providing this wealth early matters significantly more than doing so later. Figure 19 illustrates the effects of $1, $500, $5000, and $10,000.

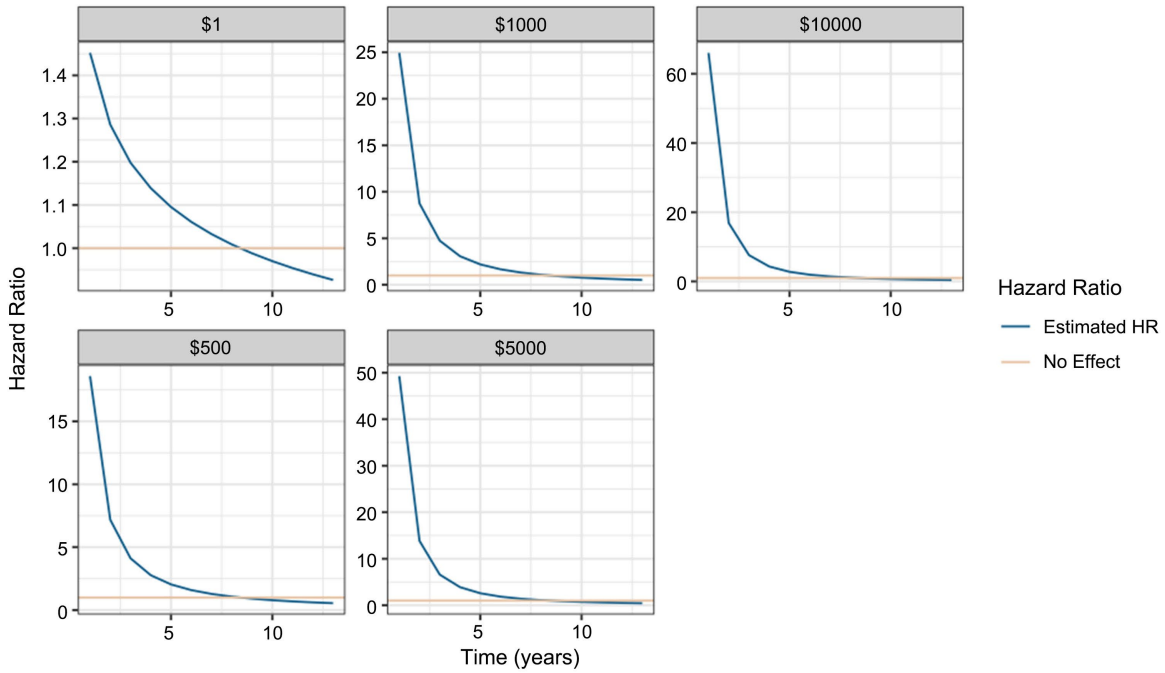

Figure 19. Time-varying hazard ratios associated with different dollar amounts of graduation wealth, showing how early graduation wealth influences the likelihood of becoming asset secured as measured by asset poverty 2.

Asset Poverty 3

Graduation Wealth. IHS transformed graduation wealth is associated with an increased hazard of becoming asset empowered. However, this covariate fails the Cox proportional hazards assumption, necessitating the incorporation of time-varying measures to allow its association with the hazard of becoming asset empowered to vary over time. With this adjustment, graduation wealth still shows a strong relationship with an increased risk of becoming asset empowered. A higher value of IHS transformed graduation wealth significantly increases the hazard of becoming asset empowered shortly after college graduation, with over 62% (see Figure 20) increase right after college. This effect diminishes over time and reverses towards the end of the study (see Figure 20, Table 11).

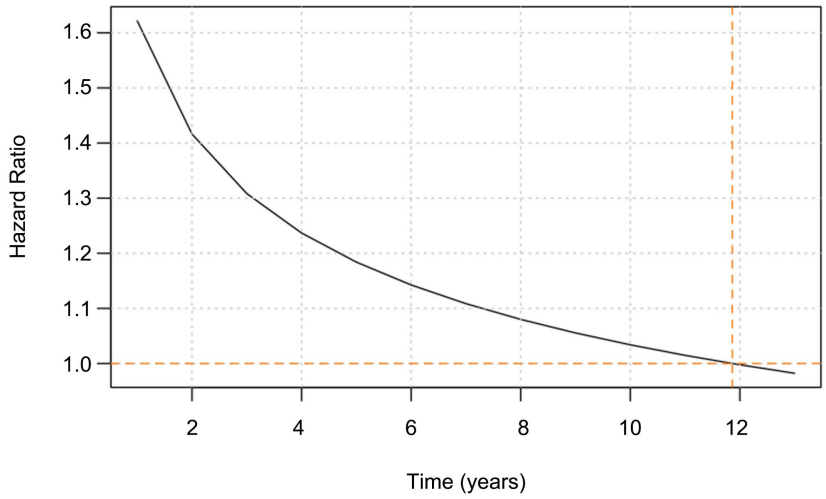

Figure 20. Time-varying hazard ratio estimates for IHS-transformed graduation wealth, showing its changing effect on becoming asset empowered over time as measured by asset poverty 3.

Table 11. Asset poverty 3 survival analysis, Cox-proportional hazard model.

Covariates	*B*	HR	CI	CI
Household (Parent/Head's Information)				
Education Level				
High School or Less	−0.188	---	0.499	1.376
Some College	−0.086	---	0.591	1.425
Not Married	−0.098	---	0.317	2.592
Unemployed	−0.145	---	0.411	1.822
Income	−0.265	0.767*	0.626	0.940
Household Size	−0.056	---	0.774	1.155
College Graduate				
Male	−0.079	---	0.625	1.365
Variables of Interest (College Graduate's Information)				
White	0.592	---	0.832	3.928
Financial Literacy	−0.194	---	0.555	1.222
Household's Amount of Student Loans	0.000	---	1.000	1.000
Wealth Variables				
Birth Wealth (Parents' Household Wealth)	0.007	---	0.969	1.046
Enrollment Wealth (Parents' Household Wealth)	0.048	---	0.993	1.108
Graduation Wealth (Graduates' Household Wealth)	0.483	1.622***	1.371	1.919

PSID = Panel Study of Income Dynamics; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$. Asset Poverty 3 is the odds of hitting each age-based net worth milestone, treating each checkpoint (e.g., 1× income by age 35, 2× by 40, etc.) as a binary outcome and accounting for within-person clustering over time.

To better understand the impact of investing real dollar amounts in graduation wealth, we present corresponding dollar-based hazard ratios in Figure 20. For example, providing a college graduate with an additional $1000 in graduation wealth increases their hazard of becoming asset empowered by a factor of 39 within the first year after graduation. By year seven, this effect declines to a factor of 2. This suggests college graduation wealth is important in increasing the instantaneous rate of becoming asset empowered for college graduates, but also that providing this wealth early matters significantly more than doing so later. Figure 21 also illustrates the effects of $1, $500, $5000, and $10,000 increases in graduation wealth on a college graduate's hazard of reaching the U.S. median net worth.

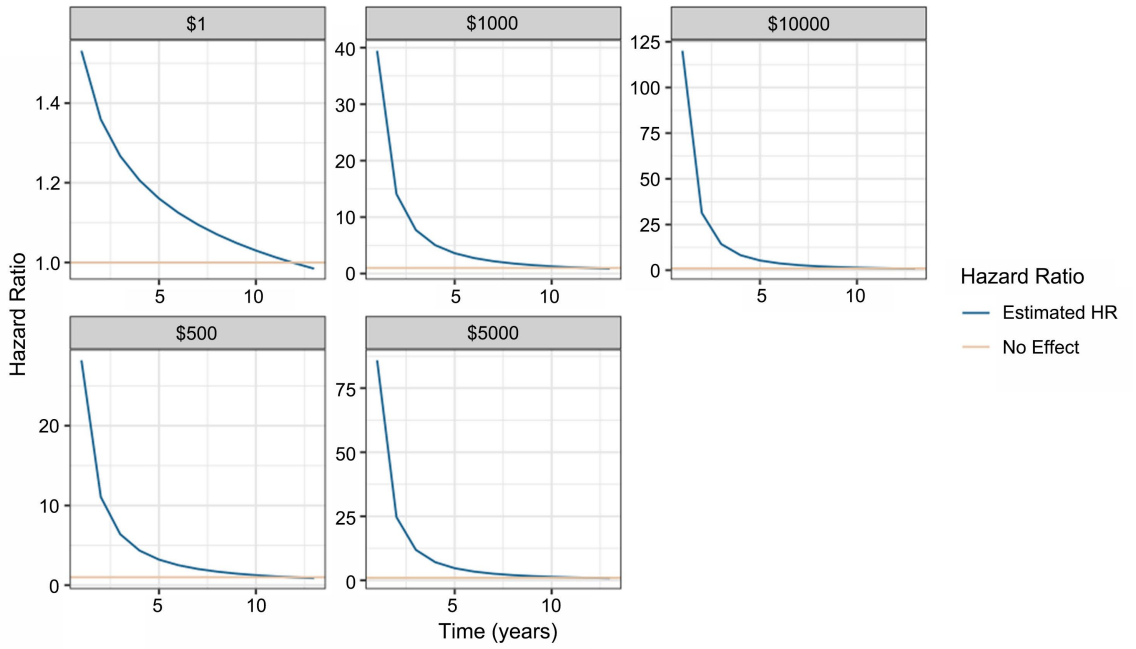

Figure 21. Time-varying hazard ratios associated with different dollar amounts of graduation wealth, showing how early graduation wealth influences the likelihood of becoming asset empowered as measured by asset poverty 3.

5. Discussion

The moral philosophy the founders of America espoused in the Declaration of Independence, that the role of government is to assure every citizen has the right to pursue happiness, demands more from its social welfare system than simply providing its citizens with enough to survive. As Americans, we should not accept anything less than a commitment to ensuring all citizens are free to make choices that will advance their economic well-being. Social welfare policies are one of the main tools at the disposal of the federal government that they can use to advance these freedoms for all of its citizens. And when it provides these benefits unequally, inconsistently, or in insufficient quantity to meets its moral standard, it is in breach of its contract with the American people.

In this article we discuss how that if a college graduate 1) is not financially included, 2) has not had adequate financial literacy training, 3) does not have

enough income to meet basic needs and save for emergencies, and 4) does not have enough wealth over a long enough time to be able to develop functionings for the purpose of achieving their own economic well-being, they lack the freedom needed to become financially capable. It is the role of government to assure that its citizens have the freedom to become financially capable. However, current measures of asset poverty take what might be considered a consumption approach to designing social welfare policies. Those measures ask, does the current set of policies provide citizens with enough to survive? From a consumption approach, people are asset poor if they do not have enough wealth that can be converted into income to meet their basic needs for a short period, typically three months, if their income stops. This definition of asset poverty does not align with the American ideal. In this article we take a financial capability approach to offer a new definition for what it means to be asset poor and how it impacts our understanding of who the asset poor are among college graduates. We also analyze economic mobility among this group in America and how each rung of the economic ladder represents a different standard of living.

5.1. Asset Poverty and the Racial Wealth Gap among College Graduates

Findings from this study indicate that in 2021, among college graduates, the Black/White wealth gap using Asset Poverty 1 was 43%. When we look across the years from 1984 to 2021, in general, findings suggest that there is a persistent, large wealth gap between White and Black families. This is consistent with past research that measures asset poverty in the full population; however, little research exists on college graduates specifically. For example, leading asset poverty scholars, Haveman and Wolff (2004) found that from 1983 to 2001, asset poverty increased among the general population from about 22% to almost 25%; for White families it went from 17% to 19%, and for Black families from 43% to 47%. In the most recent data we could find, asset poverty using the same definition for Black families was about 58% and for White families about 24% (Gibson-Davis, Keister, & Gennetian, 2021). Both studies define asset poverty as having enough net worth so that a family can live at the poverty line for three months (25%) if their income was cut off—what we call Asset Poverty 1. So, research shows that Black families are far more likely to be asset poor than their White counterparts under Asset Poverty 1's definition. In fact, over half (63%) of all Black college graduates are asset poor, whereas only a quarter of White are asset poor. Another way to say this is that the majority (75%) of White college graduates are living at a security standard while a majority (63%) of Black college graduates are living at a survival standard. A secure standard of living is having enough income to meet basic needs and enough wealth to convert into income to be able to survive for a short length of time (typically three months) if the family's income is stopped. The survival needs standard is self-explanatory, living hand to mouth with no ability to build wealth.

The second asset poverty measure defines the asset poor as having net worth equivalent to three months of a family's annual income. Using this measure of asset poverty, we find that the Black/White wealth gap is 37%. The fact that there is a significant racial wealth gap is consistent with previous findings (e.g., Oliver & Shapiro, 1997). We also find that 26% of White college graduates are asset poor in 2004 according to Asset Poverty 2, but by 2021 it drops to 18%; that is, 82% are living at a security standard. In comparison, for Black families it rose from 52% to 55% living at a survival standard of living (i.e., they are asset poor). The racial wealth gap is much larger when Asset Poverty 1 & 2 are used compared to when Asset Poverty 3 is used.

For Asset Poverty 3, we have data from 2009 to 2021, after the adult children in this sample graduate from college. Regarding the racial wealth gap in 2021, using Asset Poverty 3 we find a racial wealth gap of 15%. This is much smaller than it is for Asset Poverty 1 & 2. Among White college graduates, 74% are asset poor using Asset Poverty 3, while 89% of Black college graduates are asset poor. So generally speaking, only a small percentage of the population is living at a growth standard.

5.2. Few College Graduates Are on Track for Retirement

We hypothesized that each of the three asset poverty measures in this study, given how they are defined, represent a higher wealth bracket than the one before it, with Asset Poverty 1 being the lowest bracket and Asset Poverty 3 being the highest. However, for Asset Poverty 1, the asset poverty rate was 35% but it was lower for Asset Poverty 2, 31%. Similarly, the median wealth in 2021 for Asset Poverty 1 is zero dollars but even lower in the case of Asset Poverty 2, −$2000. So, it seems that Asset Poverty 2 does not represent a higher wealth bracket; in fact, they are quite similar in estimating who the asset poor are. In contrast, defining asset poverty from a financial capability perspective provides a much different standard of living. However, relatively few college graduates are what we define as asset empowered. Using Asset Poverty 3, 79% of college graduates are classified as being asset poor, which means only 21% are asset empowered. In as much as Asset Poverty 3 is a good proxy for being financially capable, this suggests few in America are financially capable when it comes to being on track to retire comfortably. This is consistent with what we know about retirement savings in America; few are on track. For example, the median retirement savings for American families was $87,000 in 2021 (Benson & Tennant, 2025). However, this study did not exclusively examine savings in retirement accounts. Instead, it used net worth. The median net worth of a family of four was $166,900 in 2021 (Kochhar & Moslimani, 2023). The median net worth of those who are asset poor according to the definition of Asset Poverty 3, at $40,000, is below the national averages for retirement savings and net worth in 2021. However, asset empowerment is determined using Fidelity's (2025) benchmarks for how much net worth a family should have to be on track for retirement. In 2021, the median net worth for those who were asset empowered was $615,000. This is well above the median retirement savings and

net worth amounts in 2021 for a family of four. The asset empowered college graduates have achieved a growth standard of living, able to meet basic needs plus sufficient wealth to grow and develop.

5.3. There Is a White Wealth Problem among College Graduates

However, among White college graduates, 74% are asset poor; only 25% are living at a growth standard using Asset Poverty 3. White college graduates who are asset empowered have a median net worth of $700,724, while those who are asset secure have a median net worth of $258,900 using Asset Poverty 1, or $251,500 using Asset Poverty 2. So, there is a large wealth gap between White college graduates living at a growth standard and those living at a security standard. This might help explain why many White families, even with a wealth advantage over Black families, still feel as though the system is not working for them. This data provides some support that for the majority of White families, the system is not working as it is supposed to for them. As stated in the introduction of this article, the American ideal for social welfare policy is not one of meeting basic needs; it is one of assuring all citizens have something to live for. So, while Black families on average are more likely to experience asset poverty and have less wealth in general, wealth inequality is not just a Black problem. When it comes to experiencing the right to have the financial liberty to make choices about their own life and that of their children, White families are also experiencing financial constraints imposed on their lives. This should not be surprising; research has long shown that wealth in America is concentrated among a small group at the top (e.g., Horowitz et al., 2020). While gaps in wealth between the top income families and both middle-income and lower-income families have been rising for years (Horowitz et al., 2020). In 1983 upper-income families held about 60% of all wealth in the U.S. while middle-income families held about 32%, and lower-income families about 7%. By 2016, this rose to 79% for upper-income families, while it fell to 17% for middle-income families, and 7% for lower-income families. This trend has not changed in recent years. Data from the Federal Reserve Bank of St. Louis indicates that the top 10% of U.S. households in 2024 hold about 67% of the wealth while the bottom 50% hold less than 3% of the wealth (Kent, 2024). And so, wealth inequality is not exclusively a Black/White problem; the problem is more between the haves and have nots.

5.4. Being Asset Empowered Promotes Wealth Growth

The data in this study also indicates there is a substantial growth in wealth from 2009, soon after adult children graduate college (ages 25 to 30), and 2021 when they reach early middle age (ages 37 to 42). In 2009, the median net worth of empowered college graduates is $134,705. It grows to $615,000 by 2021. This rapid growth is not seen in the case of asset secure college graduates. In 2009, their median net worth is $68,700; it grows to $217,000 by 2021. The fact that when college graduates reach middle age, they have more wealth than when they are coming

out of college aligns with the life cycle hypothesis. It states that as college graduates age, they typically will rely less on debt and build more wealth (Modigliani & Brumberg, 1954). However, the life cycle hypothesis does not explain the difference in how fast wealth is growing for the asset empowered college graduates versus the merely asset secure. Empowered college graduates are building wealth at a much more rapid pace. The median asset empowered college graduate's wealth grew by $480,295 over this time. To understand the nature of this change, the percentage increase over this 12-year period is 357%. Another way to understand it is that the compound annual growth rate (CAGR) is about 13.4% per year. In comparison, the percentage increase for asset secure college graduates is 216%; compound annual growth rate of 9.7% per year.

The panel logistic regressions provide some insight into how this growth may occur. Findings indicate that both enrollment wealth and graduation wealth are significant predictors of wealth growth from 2009 to 2021. We find that as little as a $1 (6%), $500 (53%), $1000 (60%) $5000 (76%), or $10,000 (84%) increase in enrollment wealth is significantly associated with increasing the odds a college graduate becomes asset-empowered by middle age. In the case of graduation wealth, as little as a $1 (5%), $500 (48%), $1000 (53%), $5000 (68%), or $10,000 (75%) is associated with increasing the odds a college graduate becomes asset empowered by middle age. Further, using Asset Poverty 3, college graduates in 2009 who were asset poor had median net worth of $600 and about a 50/50 probability of becoming asset poor, whereas college graduates who were asset empowered in 2009 had a median net worth of $134,705 and over a 75% chance of becoming asset empowered. So, wealth promotes growth, but lack of wealth reduces the probability that a college graduate will be economically upwardly mobile, that they will, for example, move from being asset poor, to being asset secure, or even higher to become asset empowered.

5.5. Lack of Economic Mobility

The different rungs on the economic ladder represent not simply more wealth or less wealth, but a different standard of living. Using the three asset poverty measures. We create three different rungs on the economic ladder which represent different standards of living: survival, security, and growth. The rungs on the ladder come out of research that tests hierarchical financial needs theory (Xiao & Noring, 1994; Xiao & Anderson, 1997).

Consistent with past research (Chetty et al., 2016), this study finds that economic mobility in America has largely been on the decline. However, we learn important things from this analysis about economic mobility that the authors have not seen discussed elsewhere. When looking at the asset poor and their ability to move from a survival standard of living to a security standard between 2009 and 2021, at its peak between 2009 and 2014, 18% of asset poor college graduates move up to a security standard of living; that is, they have about a 1 in 5 chance. The odds of an asset poor college graduate reaching a growth standard of living are

even less, with a low of 2% (1 in 50 chance) and a high of 4% (1 in 25 chance). Similarly, very few asset empowered college graduates fall into asset poverty. Asset empowered college graduates falling into asset poverty peaked in 2009-2014 at 13%, and in more recent years (2019-2021), it hit a low of about 4%. Asset poor college graduates are much more likely to remain asset poor even though the percent who remain asset poor has been on the decline (from 2009-2014 it is about 41%; from 2019-2021 it is about 30%).

The survival analysis also provides evidence that there is little mobility in America and that Blacks experience considerably less mobility than Whites. The findings by race are consistent with past research (Shiro, Pulliam, Sabelhaus, & Smith, 2022). After 13 years, 38% of Black college graduates remain asset poor while only 5% of White college graduates remain asset poor using Asset Poverty 1. So, the vast majority of White college graduates (about 95%) are or reach an asset security standard of living within 12 years (from ages 25 to 30--that is, shortly after graduating college), and half of White college graduates reach this standard within 6 years. Regarding reaching a growth standard of living, using Asset Poverty 3, 50% of White college graduates reach the growth standard within the 13-year period of the study, while only 25% of Black college graduates do.

Graduation wealth is one of the best predictors of whether a college graduate will ever move, or how fast they will move, from living at a survival standard to a secure standard of living. Having more graduation wealth is associated with a 47% (as corrected earlier, referencing **Figure 16**) increase in the hazard (instantaneous rate) of a college graduate moving from an asset poor standard of living to an asset secure standard, using Asset Poverty 1, and a 62% (as corrected earlier, referencing **Figure 20**) increase using Asset Poverty 3 of moving from living at an asset poor to asset empowered standard of living shortly after graduation.

Another important predictor of economic mobility in this study is the amount of student debt a college graduate's household has after they graduate. This is consistent with past research as well (Elliott & Rauscher, 2018). If a household a college graduate lives in has less than $10,000 of student debt (i.e., low debt), with respect to Asset Poverty 1, one year post graduation, 50% move into living at an asset secure standard. Whereas, if they have $10,000 or more, it takes six years before 50% of college graduates living in households with high debt move into an asset secure standard. Similarly, in the case of Asset Poverty 3, 60% of college graduates living in low student debt households move into an asset empowered standard of living. In contrast, only 40% of their counterparts with high student debt do.

5.6. Policy Implications

In this study we use three different measures of asset poverty to assess if a college graduate has the freedom to pursue the American Dream and move up the economic ladder. Findings indicate that enrollment wealth plays an important role in whether college graduates are not asset poor. Enrollment wealth is the wealth a

college graduate has at the time they enroll in college (i.e., around age 18). As such, it may serve as a proxy for college savings, but more specifically for wealth building interventions such as Child Development Accounts (CDAs). CDAs help families build wealth for college and provide a way to convert this wealth into income to pay for college when children turn 18. The enrollment wealth findings suggest that wealth building policies that provide wealth to children when they reach age 18 can have a positive impact on the return on degree they receive from graduating from college. Much of the current research on CDAs focuses on children's outcomes up to college enrollment, and there is only a little on graduating from college (e.g., Elliott, 2024). Further, there is very little research on the potential impacts of CDAs on post-college economic outcomes for children. The potential for impacts into early middle age suggests that these programs can be part of a larger strategy for solving poverty and wealth inequality.

Another potentially important policy implication from this study is that wealth inequality is an *American* problem, not only a Black problem. Much of the research and discussion on wealth inequality focuses on comparing Black and White families. This certainly is an important area of research but does not capture the full scope of the problem in America. The scope of the wealth problem and the urgency of addressing it become even more clear when the purpose of the social welfare system is viewed from the lens of America's moral philosophy. This moral philosophy we contend was established in America's Declaration of Independence when it set forth the right to pursue happiness. From an economic standpoint, the right to pursue happiness within a capitalist economic system is primarily the right to acquire property and build wealth. Wealth, we suggest, is used for the growth and development of different types of capital. And so, the right to pursue economic happiness requires freedom to become the best version of oneself. We suggest this moral philosophy can be used to assess how to design and evaluate social welfare policies. Using this lens, it brings into focus how even most White college graduates fail to reach this standard. They are stuck on the rung of the ladder that provides them with security, which is clearly a higher standard of living than being stuck at a survival standard where most Black college graduates remain. But still, what all Americans have been promised is to have the opportunity to live at a growth standard where they and their children have the real opportunity to pursue happiness, specifically as it relates to their economic well-being. So, even though the standard of living is quantitatively and qualitatively different for the asset poor than it is for the asset secure, many of the asset secure might still be left feeling the American government is failing them.

Another implication from viewing wealth inequality from this lens is that it also brings into fuller view the scope of the overall wealth problem in America and why social welfare policy might have to do more to ensure Black college graduates have equal opportunity to pursue economic happiness. Research shows that even wealth building policies like Baby Bonds would fall short of eliminating the racial wealth gap (Weller, 2024). Baby Bonds would provide children with an

annual dollar amount paid into a secure savings account that could be withdrawn when they reach age 18 (Hamilton & Darity, 2010). Weller (2024) estimates that eliminating the racial wealth gap would require policy that made a transfer of wealth to Black families specifically. This could be Black families receiving a higher transfer than other families, or it could be a transfer that only Black families receive. Black college graduates start off with less wealth post-graduation, as shown in this study. A part of the reason they start off behind is because of the long history of racial inequality in America (Oliver & Shapiro, 1997). So, for Black households, social welfare policy may have to provide a larger transfer initially to ensure all citizens have the freedom to pursue happiness as it relates to their economic well-being.

Findings from this article about the importance of graduation wealth may play an important role in finding a solution to eliminating college graduates' unequal return on degree college. While the task of narrowing or eliminating wealth inequality might appear impossible, our research suggests that if it is attacked at the right time, when it is at its smallest, it could make the impossible feel just a little more possible. Now it is important to note that there is plenty of evidence that early wealth is important to the growth and development of young children and their early development (e.g., Miller, Podvysotska, Betancur, & Votruba-Drzal, 2021). Moreover, the findings in this article suggest that enrollment wealth and graduation wealth are important for the return on degree or post-college age economic well-being. In the end, there may be four critical transitions in a child's life where it makes sense for social policy to consider providing a wealth transfer: 1) at birth—for early development, 2) when children reach 18—to pay for and get through college, 3) around age 25—to successfully transition into independent living, and 4) at retirement—to be secure in older age. Currently, the social welfare system has the most in place to provide wealth at retirement, for example, social security. Increasingly, we are seeing different asset building programs at age 18 at the state and local level (e.g., Child Development Account programs and Baby Bonds programs) but still next to nothing at the federal level. There is even less consideration being given to when children transition into independent living around age 25 (for information on average age children move out in the U.S. see, Bureau of Labor Statistics, 2014).

Our result suggests that there might also be a need to begin to recognize that means testing may be contrary to creating a social welfare system that gives all citizens the freedom to reach the growth rung of the economic ladder. This is because even what many would classify as the middle class likely have wealth that would put them on the secure rung of the economic ladder at best. As such, they are falling short of their right to the pursuit of happiness and are also owed assistance, if America is to redeem its promised "pursuit of happiness". It is evident that these financially secure Americans, like low-income families, also need assistance given the lack of mobility among this group (i.e., those on the security rung). It is almost as though there is a big fence around the growth class in America

which prevents those who are asset poor, but also those who are secure, from entering. Therefore, we suggest progressive policies would be better based not only on income thresholds, but on which rung of the economic ladder they are on (e.g., survival or security). Progressive policies would provide families at the survival rung of the economic ladder more than those at the security rung, but those at the security rung still receive needed assistance to break into the growth rung. Further, while it seems to have become vogue to set access to wealth building programs for families based on their adjusted gross incomes, it is important to recognize this is also based on a survival approach to social welfare policy, not a financial capability approach (see for example the 401 Kids Savings Account Act of 2024 or the American Opportunity Accounts Act of 2024). The wealth position of families should also be considered.

It is worth noting that we refer here to the overall wealth problem and not the Black/White wealth gap for several reasons. First, the goal of social welfare policy in America should not aim to get families to live at a security standard, which falls short of living up to the right to pursue economic happiness. Right now, most White Americans are living at a security standard, not a growth standard. Therefore, *only* comparing Black college graduates to White college graduates undersells the depth of the wealth problem in America while potentially dividing Whites from Blacks in the fight for meaningful reform. Second, we have already discussed, White college graduates also need government assistance if they are to reach the growth standard of living. However, even though both require assistance, it does not mean that one might not require more than the other as discussed.

Social welfare policy built on a financial capability foundation might come with more upfront costs, but unlike a system built on the foundation of providing its citizens with enough to survive (a safety net), it would produce fishers. Fishers do not require as much or any assistance once they learn to fish. So, in the long term, costs should go down considerably while producing the best citizenry possible. The best way to eliminate much of the expense associated with the current social welfare system is not to slash programs as some might think, but to invest in programs whose goal is to produce financially capable "fishers". Inasmuch as social welfare policy is designed to produce fishers, it is not a handout. Handouts have to be given over and over. They are a form of charity because the person cannot produce fish or enough fish for themselves and their family. Government assistance that provides people with the conditions to become financially capable seeks to remove people from needing assistance. This would appear to be the role the Founders had in mind for government, and the type of social welfare system that aligns with America's moral philosophy.

Findings from this study indicate that it takes time to grow into a financially capable person. This speaks to the limitation of only focusing on short-term interventions for ending poverty and creating economic mobility. Poverty is not the lack of food or even emergency saving, poverty is the lack of financial capability, the inability to fish or fish well enough. It does not take long to give a

person a fish, but it does take time to turn them into someone who can fish. To turn a person into someone who can fish for themselves, you must teach them to fish (financial literacy) which means more than just showing them how to cast, but where to cast, which bate to use, etc. You must give them access to a lake or some place to fish (financial inclusion). They will need bait that fish can consume (income). Then you have to provide them with a place to store the fish (wealth).

Finally, the term economic mobility provides another way to talk about the level of growth and development that exists in America--how well the social welfare system is doing at facilitating people's pursuit of happiness from an economic point of view. The lack of mobility is a sign that the American system is not working for enough people, and that much of its social welfare policies merely treat symptoms and not the root cause of low mobility. By using the three different measures of asset poverty and the different standards of living they represent, this study indicates that there is little mobility in America in a different way than has been done in the past (e.g., Shiro, Pulliam, Sabelhaus, & Smith, 2022). It brings context to how the lack of mobility represents a failure of the current social welfare system. The major policy implication of this is that America may need a social welfare revolution, one that flips the script from thinking about social welfare as a type of safety net to one that seeks to produce financially capable, asset empowered citizens.

6. Conclusion

In *The Structure of Scientific Revolutions* Thomas Kuhn (1996) discusses how periods of normal science are interrupted by periods of revolutionary science. Kuhn suggests that during periods of normal science researchers identify questions to investigate based on existing knowledge. The insights gained from these analyses are constrained, then, by the limits of the prevailing paradigm. Resulting changes tend to mostly comprise tweaks around the margins, rather than fundamental reconsiderations. Periods of normal science persist until the current is no longer able to solve a growing number of problems, or when external events provoke a clamor for a different vision, a revolution. It seems to say that enough time has passed so that it can be said that the current social welfare system and the philosophy that has produced it never has been able to end poverty nor live up to its ideal, that everyone has the freedom to pursue economic happiness. And if it has not yet, after all this time, it is unlikely to anytime in the future.

The U.S. social welfare system has been in a period of normal science for far too long. The goal of social welfare policy has been narrowly framed as only providing families with enough to survive, a safety net. This is a low bar that completely ignores its responsibility to provide all Americans with the right to pursue happiness as it relates to their economic well-being. It's a model in need of revolutionary reform. However, revolutions seldom start without a spark. U.S. policy innovation has been ignited by such sparks in the past. Maybe the current moment in history

will provide just such a spark.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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