



# Identifying Pathways for Upward Mobility

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Wide disparities in the socioeconomic status of children presage high levels of inequality in adulthood. Children born into families with incomes below the federal poverty level (FPL) are more than twice as likely to experience poverty as adults than children born into higher-income families (Acs, Elliott, and Kalish 2016). Children from lower income families lag behind in markers of adult achievement such as educational attainment and good health (Raphael 2011; Ratcliffe 2015).

Understanding the disparities in children's well-being—and how these disparities ultimately relate to a healthy and productive adulthood—can help policymakers and practitioners identify opportunities to intervene throughout childhood to enhance upward socioeconomic mobility and reduce inequality. Using data from the recently updated Social Genome Model (SGM) to track the well-being of children from birth through age 30,<sup>1</sup> we assess well-being across multiple domains (cognitive, behavioral/social, psychological/emotional, health, and relationships) at developmentally significant ages. Individuals are considered “on track” at each life stage if they meet minimum criteria in all of the domains. These data show how adults who are economically secure and in good health at age 30 progressed through their childhoods, compare their paths to those who have not attained the same level of stability by age 30, and explore demographic differences in their developmental paths.

Although almost half of all children are born into potentially challenging circumstances (such as being born into a family with low income), about 60 percent are on track for healthy development during childhood and adolescence and are economically stable and healthy by age 30. But many children (89 percent) are off track at least once. It is common for children to fall off and get back on track again at some point, but those who are off track through fewer life stages are more likely than their counterparts to be on track at adulthood. Stark differences emerge by race and ethnicity.<sup>2</sup> Two-thirds of non-Black, non-Hispanic children (henceforth referred to as “white” for ease of exposition) are born into advantageous circumstances and two-thirds are on track at age 30. In contrast, only one

in five Black children and one in three Hispanic children are born into advantageous circumstances; only two in five Black children and half of all Hispanic individuals are on track at age 30. Further, white children born into disadvantaged circumstances are more likely to be on track at age 30 than Black, non-Hispanic children who are born into advantaged circumstances. Within race and ethnic groups, neither circumstances at birth nor status at age 30 vary much by sex.

## Background

Researchers and policymakers have long sought to understand how children grow into healthy and productive adults and how to keep inequities in childhood from perpetuating later in life. The evidence around mobility-enhancing interventions is profoundly limited in two respects. First, most empirical studies focus on a single, targeted intervention, such as a nurse home-visiting program for mothers experiencing poverty or a mentoring program for middle schoolers. And most studies measure fairly short-term outcomes: Did reading scores improve from one year to the next? Do the benefits of preschool last until third grade? Very few studies link early life circumstances (and interventions that improve them) to the ultimate outcomes of interest, such as educational attainment, adult employment, and lifetime income. Moreover, policymakers lack evidence to answer the question that really matters: What combination or sequence of policies and programs will ultimately help disadvantaged children achieve a higher standard of living as adults?

The SGM offers the potential to empirically address this fundamental question. The data-rich model stretches from birth through early childhood and adolescence, into adulthood, allowing analysts to examine how circumstances and actions at developmentally significant life stages reverberate through a person's life (Acs, Martin, and Schwabish 2016).

The Urban Institute and Child Trends recently updated the model (which was originally developed at the Brookings Institution) using more recent data to better reflect the demographic makeup of the country, which continues to change as new immigrants arrive and previous immigrants continue to assimilate.<sup>3</sup> The model and its underlying data are structured around key developmental stages from birth to adulthood. The updated model includes the following eight life stages:<sup>4</sup>

1. Circumstances at birth
2. Preschool (completed at age 5)
3. Early elementary school (completed at age 8)
4. Middle childhood (completed at age 11)
5. Early adolescence (completed at age 15)
6. Adolescence (completed at age 19)
7. Transition to adulthood (completed at age 24)
8. Adulthood (completed at age 30)

At each childhood life stage, we measure key developmental outcomes and the factors and life contexts that influence those outcomes. This “ecological” model of youth development is widely accepted by practitioners and developmental researchers because it posits that development is a function of various influences (Bronfenbrenner 1979). These include the child’s own characteristics, family and household characteristics, child care or educational settings, peers, neighborhoods, and the larger social context. Recent research documents how neighborhood characteristics such as concentrated poverty and crime rates can influence children’s adult outcomes (Chetty and Hendren 2018). The “life course” model in turn posits that outcomes at any given life stage are influenced by factors from earlier life stages (Elder 1998; Shonkoff and Phillips 2000). For example, being born into poverty will potentially influence a child’s cognitive development and other outcomes in early childhood, as well as outcomes through all subsequent life stages, culminating in how economically successful that individual is at age 30. The model is informed by human capital theory and literature documenting the importance of both cognitive and noncognitive skills in early and later childhood for achieving widely held measures of success in adulthood (Duckworth and Seligman, 2005; Heckman and Rubinstein, 2001; Heckman, Stixrud, and Urzua, 2006; Shonkoff and Phillips, 2000). The model can simulate how changes and interventions during earlier developmental stages may ripple through a child’s life.

A key step in constructing the model involves defining and measuring important outcomes in child development and the factors influencing them. While specific measures will vary for children of different ages, outcomes can be grouped into specific “domains” that cut across the childhood life stages. These domains are

- cognitive and academic development,
- emotional/psychological development,
- physical health and safety,
- mental health; and
- social behaviors.

What we measure within each domain varies with age. For example, a 5-year-old exhibits behavioral problems differently than a 15-year-old. Similarly, the cognitive skills of an adolescent generally exceed those of a toddler.

Finally, we carefully select measures of success in adulthood based on literature regarding the long-term outcomes of childhood and youth interventions. These measures include earnings, educational attainment, and overall health.

## Data

Because there is no large, nationally-representative, longitudinal dataset tracking a relatively recent cohort of children from birth to adulthood, we constructed a matched panel of individuals by statistically matching data from the Early Childhood Longitudinal Survey-Kindergarten Cohort (ECLS-K) and the

National Longitudinal Survey of Youth 1997 Cohort (NLSY97). The ECLS-K provides data for the prekindergarten, early elementary, and middle childhood life stages, and the NLSY97 provides data for the early adolescence, adolescence, transition to adulthood, and adulthood life stages. For circumstances at birth, we use retrospective information gathered in both data sets. Details about how we constructed and validated the matched panel appear in the [Data and Methods](#) Appendix as well as in the Technical Documentation and User's Guide (Blagg, et al.). We validated the data by comparing life trajectories in our matched panel to life trajectories observed in an older birth cohort from Children of the National Longitudinal Survey of Youth 1979 dataset.

## Approach

Using our final matched and imputed dataset, we identified metrics at each life stage to determine whether an individual would be considered “on track.” For every life stage, if an individual was off track for any of the metrics outlined above, we considered them off track for the entire life stage.

At birth, we consider the child's birthweight, mother's age at first birth, parents' marital status, and the family's income to needs ratio. To be advantaged or “on track,” the child had to be born to married parents, born to a mother at least 18 years old, not have a low birth weight, and have family income greater than 100 percent of the federal poverty level. Because we do not have income information gathered at birth, we use family income to needs ratio as measured at age 8 as a proxy. Children who live in families with incomes below the federal poverty level at age 8 may be raised in persistently in low-income families, and as such, this serves as a marker for being born and raised in disadvantaged circumstance.

In the prekindergarten life stage, we expanded to five variables, based on the domains discussed above. We combined math and reading scores into one index of cognitive achievement and combined internalizing and externalizing behavior into one measure of behavior. Additionally, we included measures of health, parent-child relationship, and interpersonal skills. We standardized all of the variables to have similar scales so they can be compared easily (i.e., they have a mean of 0 and a standard deviation of 1). For test scores and behavior measures, the cutoff for being on track is one standard deviation below the mean. For the other three variables, we used cutoffs that were close to one standard deviation below the mean that corresponded with critical values on the nonstandardized scale.<sup>5</sup> Critical values demark responses strongly associated with other outcomes or more sophisticated measures of the same construct.

For early elementary school, we use the same variables as in prekindergarten with one exception: instead of interpersonal skills, we include self-control. Middle childhood includes many of the same measures as early elementary school but uses peer relationships instead of parent-child relationships.

Beginning in early adolescence, we focus on cognitive development, mental and physical health, and behavior. In early adolescence we include a health status measure, a mental health scale (the 5-item mental health inventory), a 10-item index of delinquent behavior, and the Armed Services Vocational Aptitude Battery (ASVAB) test score (all standardized). Specific cutoffs differ for each

variable, though they are generally close to one standard deviation below the mean or corresponded with critical values on the nonstandardized scale.

In adolescence, we incorporate the same variables as in early adolescence, with the exception of the cognitive domain. We remove ASVAB score and instead include a marker of a high school diploma with a grade point average of at least 2.0.

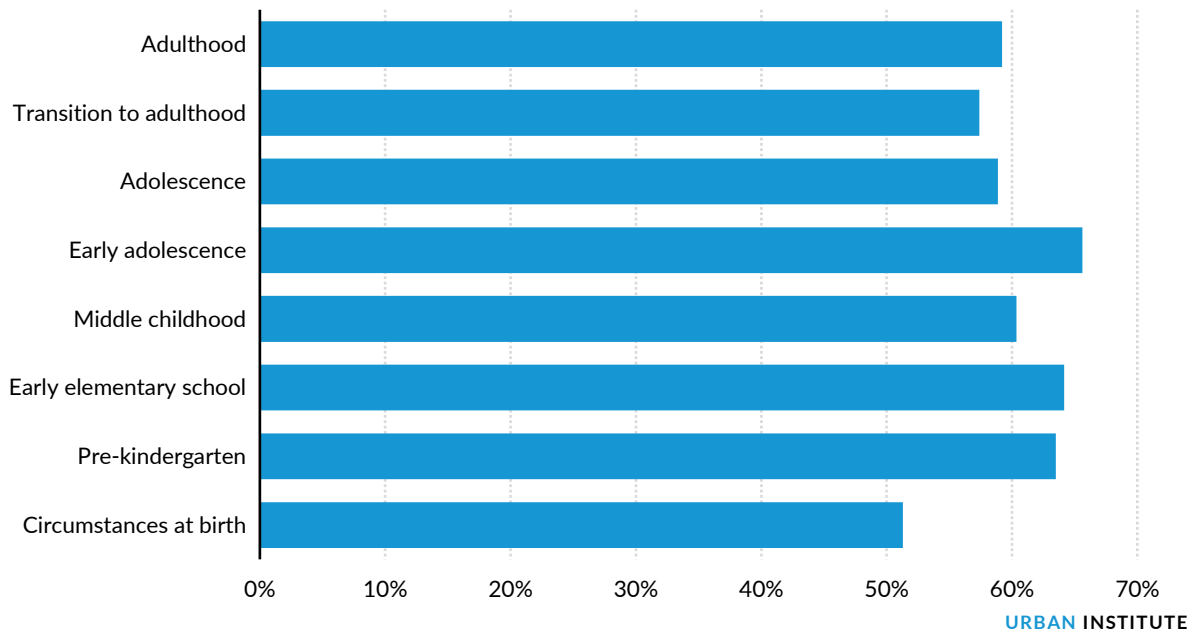
In the transition to adulthood and adulthood stages, we shift our focus from development to well-being, with markers of self-sufficiency and mental and physical health. We no longer include the behavior domain and continue using the same mental health and health status measures as in adolescence. To measure self-sufficiency in both of these life stages, we require either that an individual's income be over 200 percent of the federal poverty level or that they be enrolled in school or a training program with an annual income above 100 percent of the FPL Critical values for each component that are used to assess if a child is on track at each life stage appear in the Data and Methods Appendix table A.1.

## Results

Over half of children are on track at birth (51 percent) by our definition, and nearly three in five (59 percent) are on track by age 30 (figure 1). Just under two-thirds of children are on track at each life stage from ages 5 through 14 (prekindergarten through early adolescence), with the share on track falling below 60 percent in adolescence and in the transition to adulthood. The most common factors indicating children are off track at birth are parents' marital status and family income. In the prekindergarten, early elementary, and middle childhood stages, no single factor plays an outsized role in keeping children off track. Among early and other adolescents, cognitive/academic performance is the most important factor keeping them off track. In the two adult life stages, income plays the largest role.

FIGURE 1

Percent On Track in Life Stage (All Demographics)

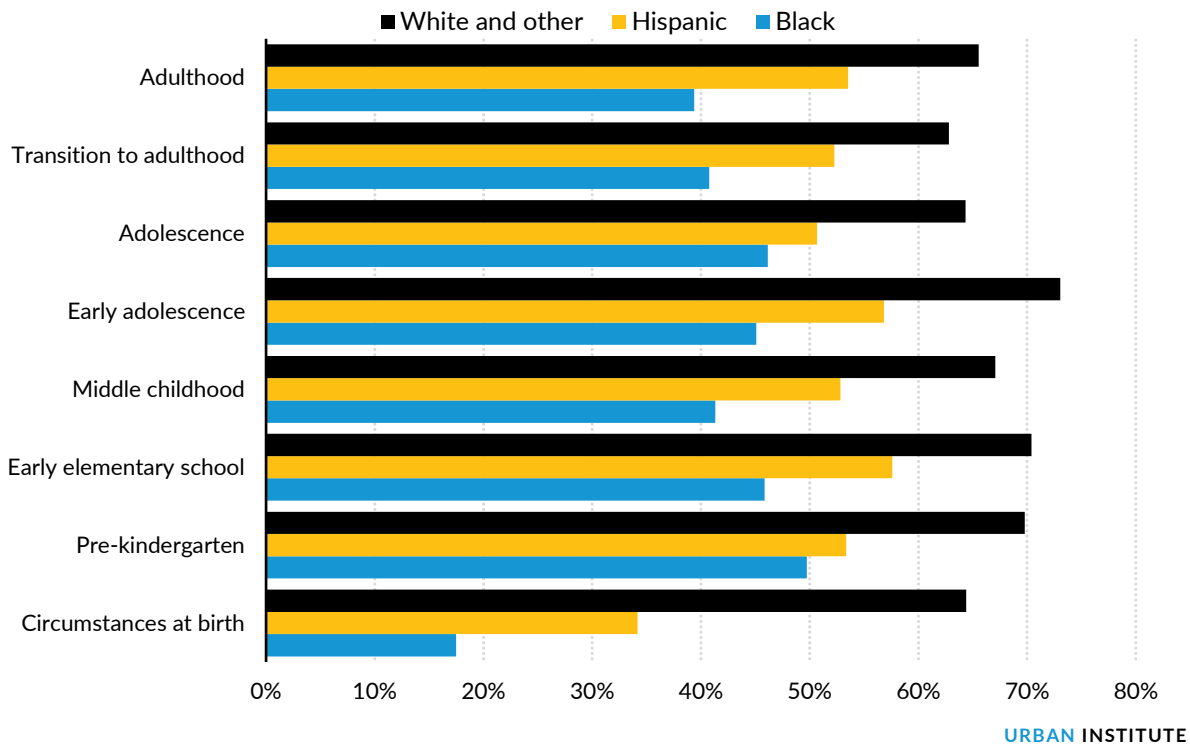


Source: Social Genome Model.

Persistent differences by race and ethnicity arise at birth and continue through the life course (figure 2). Nearly two-thirds of white children are born into advantaged circumstances (on track) and 66 percent are on track at age 30. In contrast, only 17 percent of Black children are on track at birth and fewer than 40 percent are on track in adulthood. Hispanic children fall between the two other groups, with 34 percent on track at birth and 54 percent on track at age 30. Even though Black and Hispanic children are far more likely to be born into disadvantaged circumstances than white children, the data suggest that many are able to move on track by adulthood. For example, nearly twice as many Black people are on track at age 30 as are born on track.

FIGURE 2

Percent on Track in Life Stage by Race



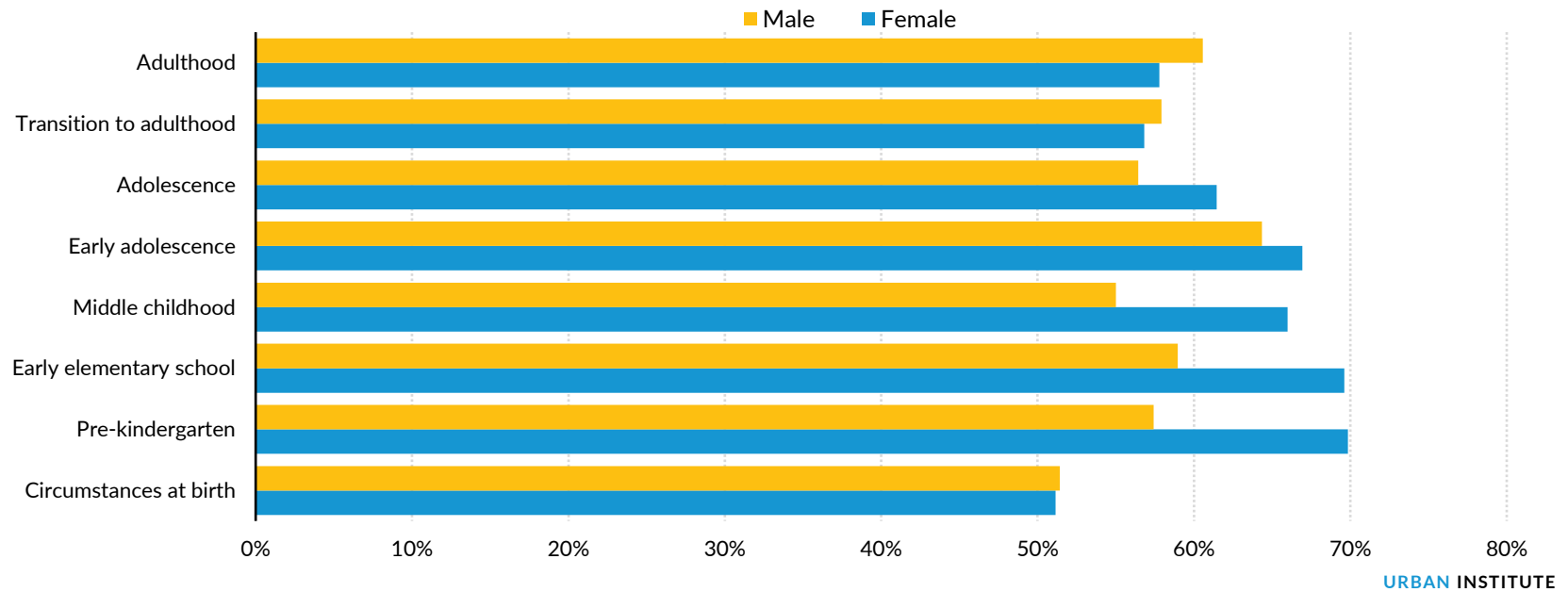
Source: Social Genome Model.

Men are slightly more likely to be on track at age 30 than women even though boys and girls are equally likely to be born into advantaged circumstances. Through childhood and adolescence, girls are slightly more likely to be on track than boys, but that reverses in the transition to and into adulthood.

Patterns between males and females within race and ethnic groups largely reflect overall sex differences. Although racial and ethnic gaps are large at age 30, gaps between men and women, conditional on race and ethnicity, are small

FIGURE 3

Percent on Track in Life Stage by Sex



Source: Social Genome Model.

TABLE 1

Percent on Track in Life Stage by Race and Sex

	Circumstances at birth	Pre-K	Early elementary school	Middle childhood	Early adolescence	Adolescence	Transition to adulthood	Adulthood
Black female	18%	55%	51%	45%	49%	55%	39%	39%
Black male	17%	44%	41%	38%	41%	38%	42%	40%
Hispanic female	34%	60%	63%	57%	56%	53%	53%	53%
Hispanic male	34%	47%	53%	49%	57%	48%	51%	54%
White and other female	64%	76%	76%	74%	74%	65%	62%	64%
White and other male	65%	64%	65%	61%	72%	63%	64%	67%

Source: Social Genome Model.



## Patterns

The children considered on track at any given life stage do not necessarily stay on track, and some who are off track can get on track as they age. While movements on and off track vary, over 70 percent of children who are on track in one stage, generally stay on track into the next (figure 2). Over half of those born into disadvantaged circumstances are on track by age 5. For those off track during childhood, movements on track vary by life stage ranging from 29 percent between the early elementary and middle childhood stages to 55 percent between middle childhood and early adolescence. The large movement we observe from off to on track between middle childhood and early adolescence likely reflects both a seam in the data, with early childhood data coming from the ECLS-K and the early adolescence data coming from the NLSY97, as well as a shift in the age-specific criteria we use to assess status. As children move from adolescence to the transition to adulthood stage (age 24) and then on to adulthood (age 30), over 40 percent of those who are off track come back on track.

Movements on and off track vary by race and ethnicity and by sex. White children are more likely to stay on track than Hispanic children, who in turn are more likely to stay on track than Black children. Similarly, among children who are off track in any particular stage, white children are more likely to move on track in the subsequent stage than are Hispanic and Black children. Girls are more likely to stay on track than boys, but boys are more likely than girls to move from off track to on track between adolescence and the transition to adulthood and adulthood.

FIGURE 4

Life Course Pattern: All

**Circumstances at birth**

Advantaged: Born at a normal birth weight to a nonpoor, married mother at least 18 years old

**Prekindergarten (age 5)**

On track: Acceptable reading and math scores, behavior, interpersonal skills, parent-child relationship, and health

**Early elementary school (age 8)**

On track: acceptable reading and math scores, behavior, self-control, parent-child relationship, and health

**Middle childhood (age 11)**

On track: Acceptable reading and math scores, behavior, self-control, peer relationships, and health

**Early adolescence (age 14)**

On track: Acceptable ASVAB score, behavior, mental health, and health

**Adolescence (age 19)**

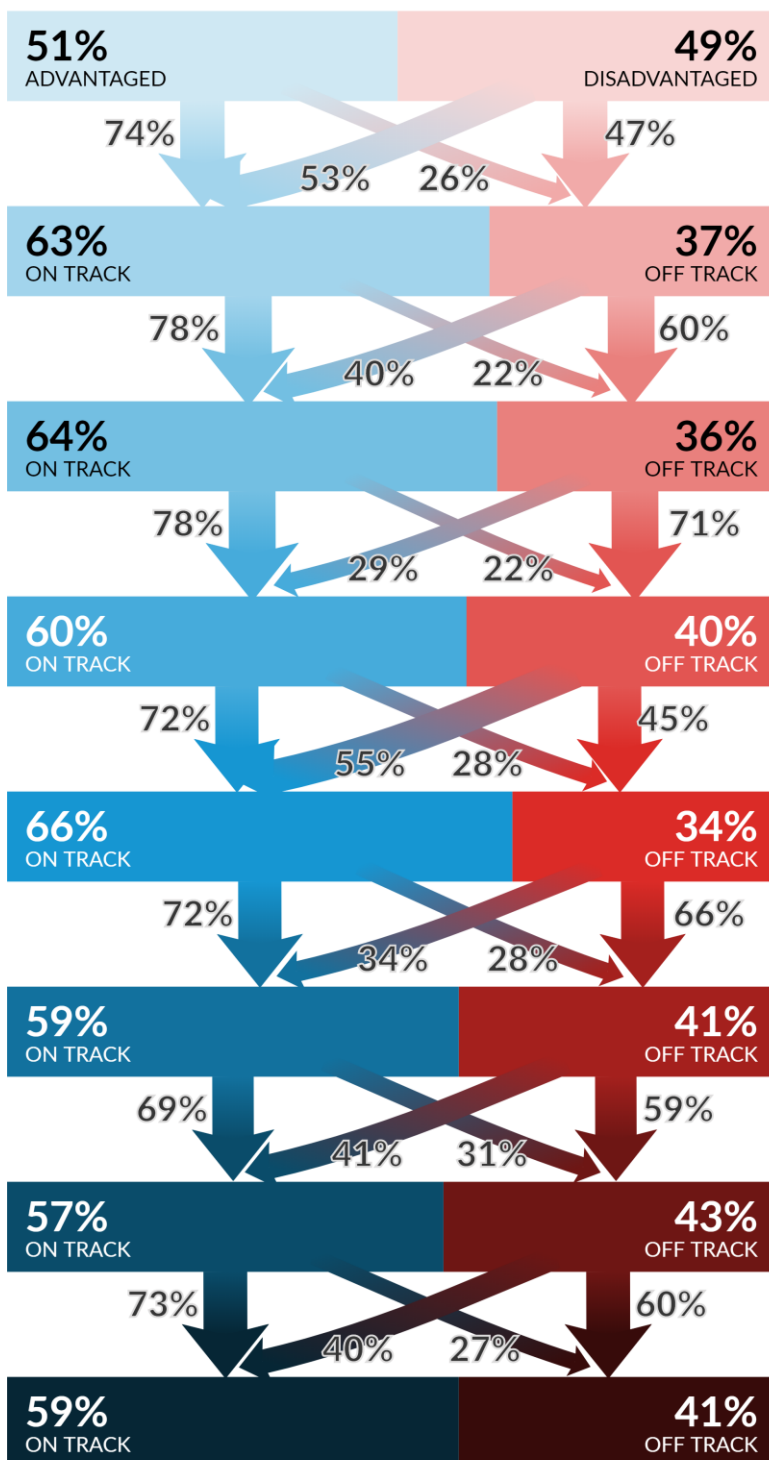
On track: High school graduate with GPA of at least 2.0; acceptable behavior, mental health, and health

**Transition to adulthood (age 24)**

On track: Family income at least 200% of FPL or 100% of FPL if a student; acceptable mental health and health

**Adulthood (age 30)**

On track: Family income at least 200% of FPL or 100% of FPL if a student; acceptable mental health and health



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Source: Social Genome Model.

TABLE 2

## Life Course Pattern by Race and Sex

	Pre-K	Early elementary school	Middle childhood	Early adolescence	Adolescence	Transition to adulthood	Adulthood
<b>Black</b>							
Percent on track who stay on track	67	64	67	52	63	53	59
Percent off track who stay off track	54	72	81	59	68	70	74
<b>Hispanic</b>							
Percent on track who stay on track	63	75	73	63	64	66	68
Percent off track who stay off track	52	63	74	50	67	62	62
<b>White and other</b>							
Percent on track who stay on track	76	81	81	77	75	72	77
Percent off track who stay off track	41	54	66	36	65	53	53
<b>Female</b>							
Percent on track who stay on track	80	81	81	73	74	69	73
Percent off track who stay off track	41	56	68	44	64	62	62
<b>Male</b>							
Percent on track who stay on track	68	75	75	72	70	69	73
Percent off track who stay off track	53	63	74	45	69	56	57
<b>Black female</b>							
Percent on track who stay on track	76	67	67	53	70	50	59
Percent off track who stay off track	49	70	79	54	60	74	74
<b>Black male</b>							
Percent on track who stay on track	59	59	68	50	55	58	58
Percent off track who stay off track	58	73	82	64	74	67	74
<b>Hispanic female</b>							
Percent on track who stay on track	70	77	75	62	67	65	66
Percent off track who stay off track	45	59	74	51	64	60	62
<b>Hispanic male</b>							
Percent on track who stay on track	56	73	70	65	62	68	70
Percent off track who stay off track	58	65	75	50	70	65	63
<b>White and other female</b>							
Percent on track who stay on track	82	84	84	78	76	73	77
Percent off track who stay off track	34	49	60	36	66	59	58
<b>White and other male</b>							
Percent on track who stay on track	70	78	77	77	74	70	76
Percent off track who stay off track	48	58	70	36	65	48	48

Source: Social Genome Model.

Being born into disadvantaged circumstances does not doom a child’s life prospects, although those born into disadvantage are less likely to be on track later in life than those born into advantaged circumstances (table 3). Half of all children born into disadvantaged circumstances are on track at age 30 as compared to over two-thirds of those born into advantaged circumstances.

Again, there are stark differences by race and ethnicity. While 58 percent of white children from disadvantaged circumstances are on track at age 30, that holds true for only 37 percent of Black, non-Hispanic children and 50 percent of Hispanic children. Advantage is also “stickier” for white children. Among those born into advantaged circumstances, 70 percent of white people are on track at age 30, compared with 50 percent of Black, non-Hispanic people and 61 percent of Hispanic people. Structural economic and social forces including residential segregation, unequal access to educational opportunities, and unequal treatment by law enforcement likely make it harder for Black, non-Hispanic and Hispanic children than white children to overcome disadvantage and retain advantages.

Boys are slightly more likely to overcome disadvantage and retain advantage than girls. Racial and ethnic differences within sex groups reflect overall differences by race and ethnicity.

**TABLE 3**  
**Share On Track in Adulthood by Status at Birth**

	On track in adulthood if off track at birth	On track in adulthood if on track at birth
All	50%	68%
Black	37%	50%
Hispanic	50%	61%
White and other	58%	70%
Female	48%	67%
Male	52%	69%
Black female	37%	50%
Black male	38%	51%
Hispanic female	49%	61%
Hispanic male	50%	61%
White and other female	54%	69%
White and other male	61%	71%

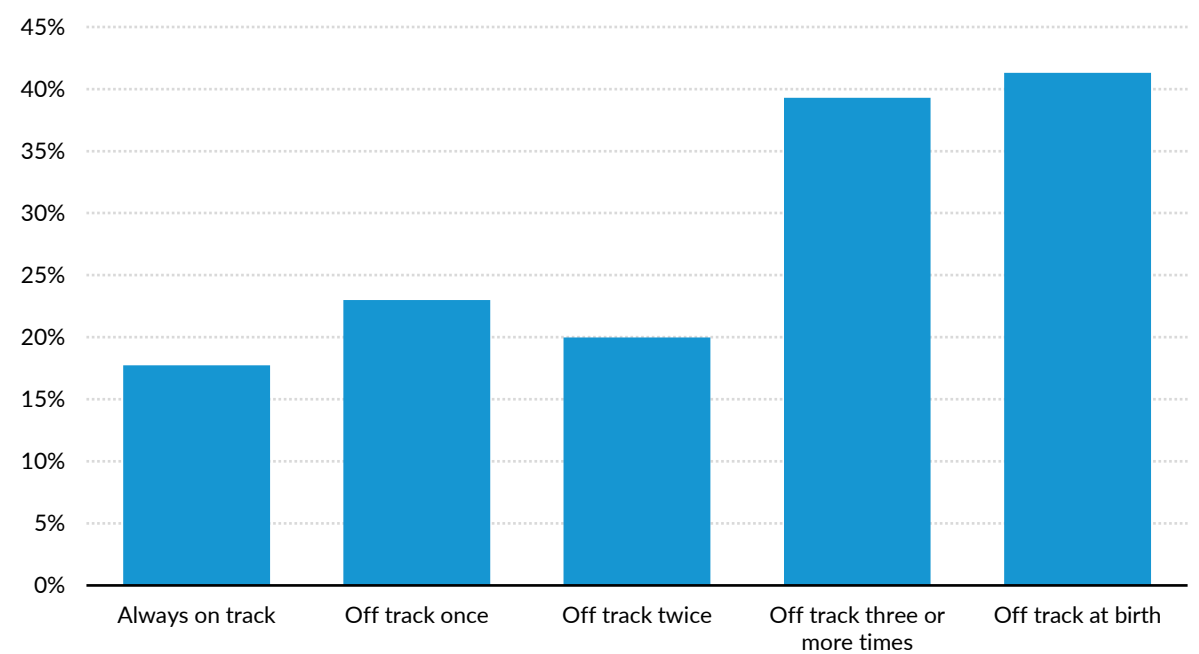
Source: Social Genome Model.

### Pathways to Success

Ultimately, the goal of policies, programs, and practices targeted at children is to ensure that they grow up in a favorable environment with support from families, schools, and the wider community to become healthy, stable, and secure adults. The path to being on track in adulthood, however, is usually not a smooth one. Only 18 percent of all adults who are on track at age 30 were on track at every life stage we consider (figure 5). And 39 percent were off track in three or more life stages yet still

managed to be on track at age 30. A full 41 percent of those on track in adulthood were born into disadvantaged circumstances.

**FIGURE 5**  
**Life Course for those on Track in Adulthood: Total**

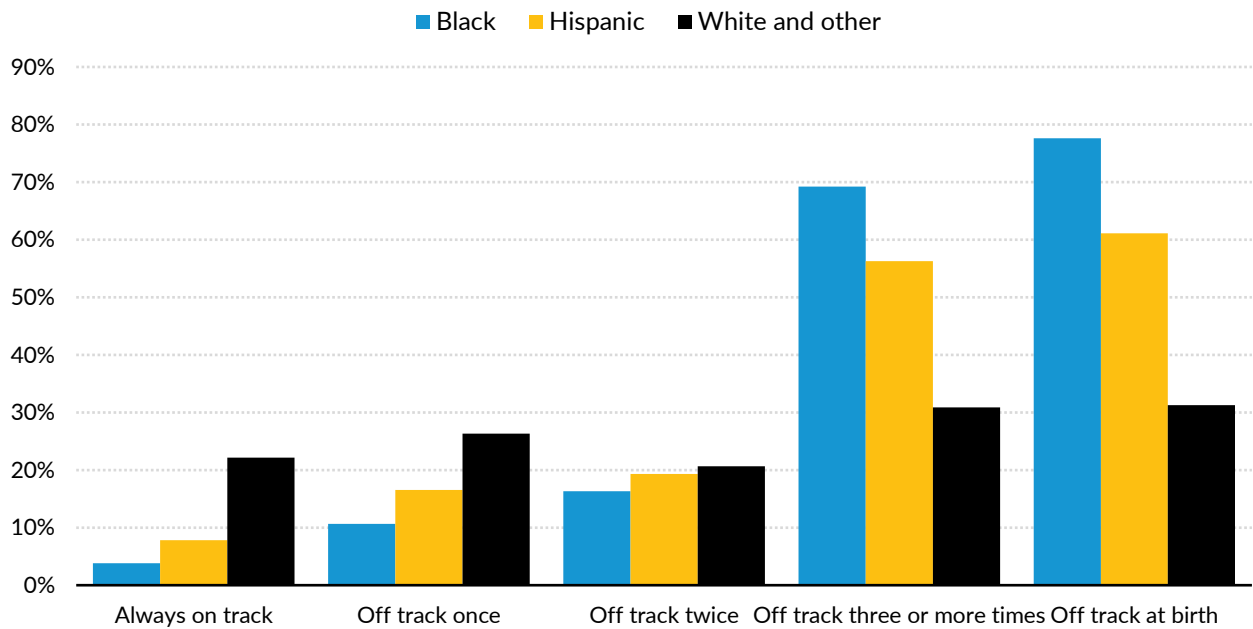


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Source: Social Genome Model.

The paths to stability and security in adulthood vary by race and ethnicity and by sex. More than two-thirds of white adults who are on track at age 30 were on track in at least five out of seven earlier life stages. In contrast, over two-thirds of Black adults and 56 percent of Hispanic adults were off track in three or more life stages before adulthood. And 78 percent of Black people and 61 percent of Hispanic people who are on track in adulthood were born into disadvantaged circumstances. Women who are on track at age 30 were off track in fewer life stages than adult men who are on track. Crossing race and ethnicity and sex shows that only 2 percent of Black men who are on track as adults were on track in each life stage, compared with 27 percent of white women.

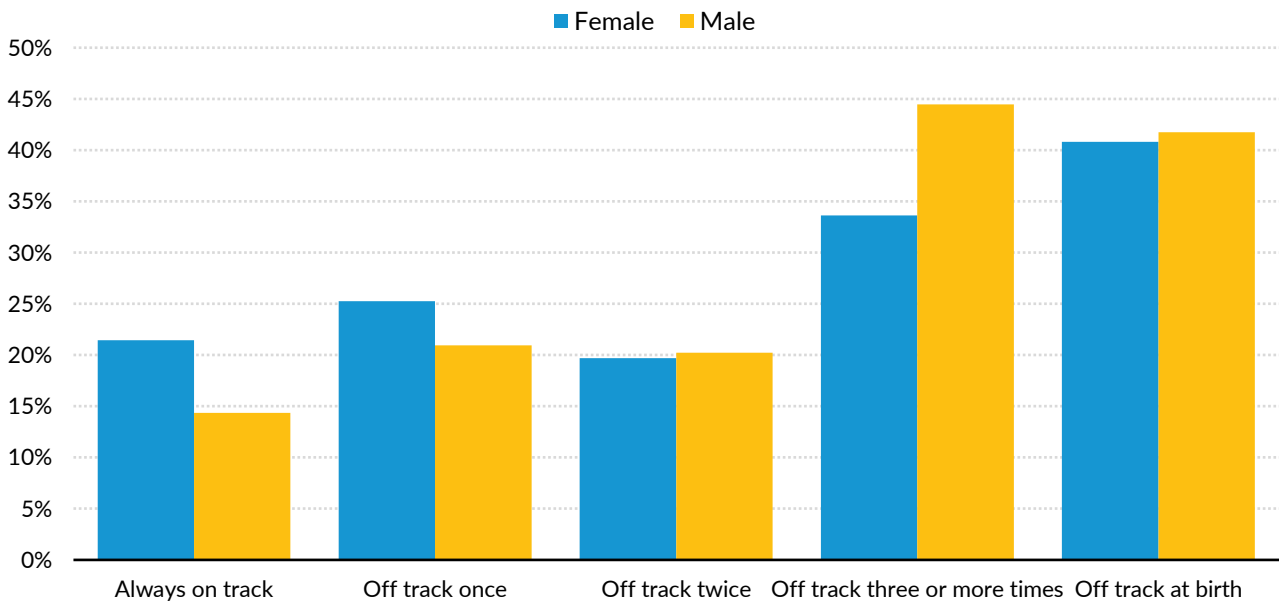
**FIGURE 6**  
**Life Course for Those on Track in Adulthood by Race**



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Source: Social Genome Model.

**FIGURE 7**  
**Life Course for those on Track in Adulthood by Sex**



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Source: Social Genome Model.

TABLE 4

**Life Course for Those on Track in Adulthood by Race and Sex**

	Always on track	Off track once	Off track twice	Off track three or more times	Off track at birth
Black female	5%	13%	18%	63%	77%
Black male	2%	8%	15%	75%	78%
Hispanic female	9%	18%	20%	53%	61%
Hispanic male	7%	15%	19%	59%	62%
White and other female	27%	29%	20%	24%	30%
White and other male	18%	24%	21%	37%	32%

Source: Social Genome Model.

## Discussion

Using the matched panel data developed for SGM, we find that adults who have achieved good health and economic security (or are at least well on their way there) have not always been on track throughout their childhood and adolescent years. Children born into disadvantaged circumstances do move on track later in life and on into adulthood. Similarly, children who are on track at one life stage can slip off track later on. Only 18 percent of those on track at age 30 were on track at each life stage we consider.

This dynamism in life trajectories highlights the importance of supporting children who are struggling in school or facing emotional, social, or health-related challenges. Children can and do come back on track, and policies, programs, and practices that target struggling children may help them achieve security and stability in adulthood, even if the path there is somewhat rocky.

Our findings also highlight substantial racial and ethnic variations throughout the life course. Disparities are apparent at birth and persist into adulthood. Two-thirds of white children are born into advantageous circumstances and are on track at age 30. In contrast, fewer than one in five Black children and about one in three Hispanic children are born into advantageous circumstances, 54 percent of Hispanic children and 39 percent of Black children are on track at age 30. Despite these differences in starting points and outcomes, more Black and Hispanic adults are on track age 30 than were on track at birth. This suggests that policies and programs targeting disadvantaged children can help further narrow racial and ethnic disparities in adulthood.

## Appendix: Data and Methods

We statistically matched these two datasets at the point where the two samples overlap in age, in early adolescence. To begin the matching process, we divided both datasets into six race and sex groups: Black men, Black women, Hispanic men, Hispanic women, white men, and white women. Within each group, we further divided the sample based on variables that are present in both datasets and allow us to match younger and older children with similar characteristics and trajectories. In order,

these variables were math score, chronic absenteeism, mother's education, poverty level, mother's age at first birth, and urbanicity. If a division would cause one of the resulting groups in either dataset to be smaller than 10 individuals, we did not make that division. We then moved on to the next variable and see if division is then possible.<sup>6</sup>

Within the smallest groups created by this series of divisions, we randomly matched people in the ECLS-K and NLSY97 datasets. As part of this process, we created replicates of observations based on the observation's sample weight. In other words, we replicated observations with larger weights more times than those with smaller weights. The replication process was necessary to allow for enough matches given the relatively small sample size of the two datasets. The NLSY97 has just under 9,000 observations, while the ECLS-K has around 20,000. We matched pairs based on this weighted file, developing a dataset of 100,000 observations. Following the matching, we used a multiple imputation procedure to impute missing data, generating four replicates of the sample which we combined to create the final dataset of approximately 400,000 observations.

After creating the final dataset, we validated the data by comparing correlations from childhood to adolescence in our synthetic data with correlations from the Children of the National Longitudinal Survey of Youth 1979, an older longitudinal dataset that follows children from birth to adulthood. Finally, we applied weights to the data file so the data reflect the demographic characteristics of children born in the US in 2000. (Alternative weights can be applied to resemble other birth cohorts in the US or in subnational areas.) More details on our data construction and validation procedures can be found in the Technical Documentation and Users Guide.

TABLE A.1

Cutoffs Used to Define On Track

	Metric	
Life stage	Cutoff	Scale equivalent for cutoffs shown in standard deviations
<b>Circumstances at birth</b>		
Birthweight	≥ 5.51 pounds	
Mother's age at first birth	≥ 18 years old	
Parents marital status	Married	
Family income-to-needs ratio	> 100% of FPL	
<b>Prekindergarten</b>		
Combined Internalizing and externalizing behavior	≥ -1 SD	
Combined math and reading scores	≥ -1 SD	
Interpersonal skills	≥ -0.728 SD	At least 2.6 of 4
Health	≥ -1.57 SD	At least "good"
Parent-child relationship	≥ -1.876 SD	At least 3 of 4
<b>Early elementary</b>		
Combined Internalizing and externalizing behavior	≥ -1 SD	
Combined math and reading scores	≥ -1 SD	
Self-control	≥ -1.048 SD	At least 2.5 of 4
Health	≥ -1.6 SD	At least "good"



Life stage	Cutoff	Metric
		Scale equivalent for cutoffs shown in standard deviations
Parent-child relationship	$\geq -1.469$ SD	At least 3 of 4
<b>Middle childhood</b>		
Combined Internalizing and externalizing behavior	$\geq -1$ SD	
Combined math and reading scores	$\geq -1$ SD	
Self-control	$\geq -1.142$ SD	At least 2.5 of 4
Health	$\geq -1.475$ SD	At least "good"
Peer relationships	$\geq -1.08$ SD	At least 2.33 of 4
<b>Early adolescence</b>		
Delinquency index	$> -1.906$ SD	Fewer than 5 of 10
ASVAB score	$\geq -1$ SD	
Health	$\geq -1.14$ SD	At least "good"
Mental health	$\geq -1.692$ SD	Fewer than 9 of 15
<b>Adolescence</b>		
Delinquency index	$> -3.839$ SD	Fewer than 5 of 10
Education	GPA $> -1.258$ SD and has HS degree	At least 2.0
Health	$\geq -0.992$ SD	At least "good"
Mental health	$\geq -1.662$ SD	Fewer than 9 of 15
<b>Transition to adulthood</b>		
Income-to-needs ratio	$> 200\%$ of FPL or $> 100\%$ if student	
Health	$\geq -0.857$ SD	At least "good"
Mental health	$\geq -1.863$ SD	Fewer than 9 of 15
<b>Adulthood</b>		
Income-to-needs ratio	$> 200\%$ of FPL or $> 100\%$ if student	
Health	$\geq -0.67$ SD	At least "good"
Mental health	$\geq -1.936$ SD	Fewer than 9 of 15

## Notes

- <sup>1</sup> The Social Genome Model is a regression-based, life cycle simulation model of human development. For a description of the model and technical documentation, see Blagg and Werner (2021).
- <sup>2</sup> When discussing racial and ethnic differences, the term "white" refers to those who are neither Hispanic nor Black, "Black" refers to those who are Black, non-Hispanic, and Hispanic refers to those who are non-white, non-Black Hispanic.
- <sup>3</sup> For a description of the original Social Genome Model, see Sawhill and Reeves (2016) <https://muse.jhu.edu/article/616921/summary>.
- <sup>4</sup> The model also includes an Early Childhood stage, measured at age 2, but those data are not publicly releasable and not used here.
- <sup>5</sup> For variables measured using qualitative response scales (e.g., a series of "always, sometimes, never" type questions, critical values are those scores that are strongly associated with other outcomes or more sophisticated measures of the same construct. For example, a score of 3 or below on a hypothetical 15-point mental health scale may predict a diagnosis of clinical depression 85 percent of the time.

<sup>6</sup> Once these smaller groups have been created, we further split them into quintiles using a logit model. We estimate a logit model where the dependent variable is likelihood of being in the ECLS-K. Each of the smaller groups is sorted by predicted probability of being in the ECLS-K and then divided into quintiles.

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