

ANALYSIS

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The Macroeconomic Benefits of Racial Integration

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The findings of this paper show that the more racially integrated our society, the stronger our economy. Long-term economic growth is significantly enhanced in communities that are more integrated. Moreover, since minorities will compose an increasing share of the population, and [will become the majority by mid-century](#), the economic benefits of racial integration are set to become even greater.

Indeed, if communities across the country were to more fully integrate racially so that they were comparable to the nation's most integrated communities, we estimate that the nation's real GDP growth over the next decade would increase from 2.4% to 2.7% per annum. This would be an economic game changer. Of course, racial integration is at best slow to change, but even modest changes to encourage integrated communities could meaningfully boost our economy's long-term growth.

The Macroeconomic Benefits of Racial Integration¹

BY MARK ZANDI, DANTE DEANTONIO, KWAME DONALDSON AND MATT COLYAR

During the COVID-19 pandemic, the nation's longstanding racial inequities have been laid bare. The health and finances of families of color have been disproportionately hurt and racially charged civil strife has wracked much of the nation.² Addressing these inequities will be difficult, but not doing so will be extraordinarily costly to all Americans.

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Indeed, if communities across the country were to more fully integrate racially so that they were comparable to the nation's most integrated communities, we estimate that the nation's real GDP growth over the next decade would increase from 2.4% to 2.7% per annum.⁴ This would be an economic game changer. Of course, racial integration is at best slow to change, but even modest changes to encourage integrated communities could meaningfully boost our economy's long-term growth.

Relevant research

There has been much attention on how the financial well-being of families of color have lagged that of white households, particularly given that the economic fallout of the pandemic has hit minority households especially hard. The pandemic has pushed unemployment higher and reduced labor force participation across all groups but substantially more so for minorities (see Chart 1).⁵

Of course, coming into the pandemic non-white households were financially far behind white households. In 2019, the median net worth of white households was nearly eight times larger than that of Black households and more than five times that of Hispanic households (see Chart 2).⁶ A significant part of this [wealth gap is explained by wide differences in homeownership](#), which is the principal way most households build wealth. The white homeownership rate is close to 75%, compared with less than 50% for Hispanics and closer to 45% for Black families.

The wealth gap between white and Hispanic families has closed somewhat over the past several decades, but mostly because the median wealth of white families has declined. And the wealth gap between white and Black families has remained persistently wide, as the median net worth of Black families has also declined.

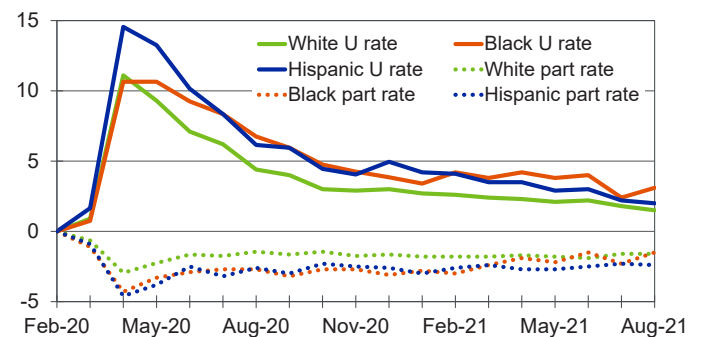
Recent research from [Citigroup](#) and [McKinsey](#) has considered what it would mean for the economy if these wealth gaps were closed. Not surpris-

ingly, if Black and Hispanic wealth could be increased to equal that of whites, the economy would be trillions of dollars larger. A recent [San Francisco Federal Reserve](#) study took a similar approach identifying gaps in opportunities and labor market outcomes across race and gender and determined the aggregate economic losses using a growth accounting model. They are substantial. Other recent [academic](#) research and work by the [International Monetary Fund](#) have considered the implications of racial discrimination for broader economic growth and concluded that greater discrimination significantly diminishes the economy.

Research has also been done to identify the channels through which racial discrim-

Chart 1: Pandemic Hits Minorities Harder

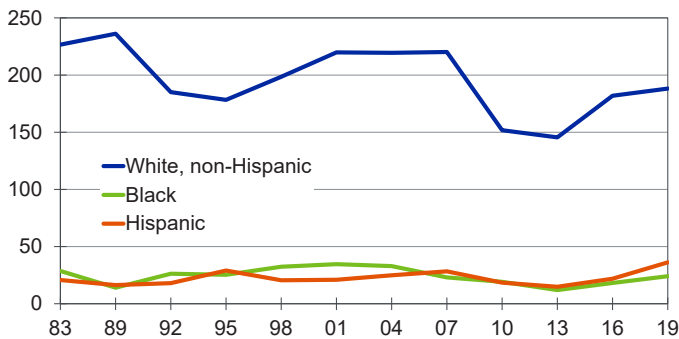
Ppt change, Feb 2020 to Aug 2021



Sources: BLS, Moody's Analytics

Chart 2: Large Racial Wealth Gap

Median net worth, 2019\$ ths



Sources: Federal Reserve SCF, Moody's Analytics

ination impacts economic outcomes for households. Researchers at the Urban Institute have connected racial segregation to less [educational resources](#), [lower educational attainment](#), and thus [reduced incomes of Black families and higher homicide rates](#). Similarly, the research institute [New America](#) has focused on the link between segregation, access to credit, and economic performance.

Also relevant to our research is recent work from the University of California at Berkeley's "[The Roots of Structural Racism Project](#)" measuring racial segregation across the country. According to Berkeley, segregation has gotten worse over the past 30 years leaving segregated communities of color with lower incomes, higher unemployment, lower home values, and less education than segregated white communities. However, Blacks and Hispanics who grew up in segregated white communities were able to earn significantly higher incomes than those in communities of color. This work concludes that race is not the determining factor in an individual's life outcomes, but rather the environment in which that individual lives.

Our paper statistically connects the dots between racial integration and the economy's performance.⁷ We show that more racially integrated communities benefit from meaningfully stronger real GDP and house price growth. We also identify some of the potential channels through which this may possibly occur.

Measuring racial integration

To measure racial integration across geographies, we construct a racial integration score for each of the nation's counties.⁸ The

Alaska Native, Asian, Native Hawaiian or other Pacific Islanders, another race, and two or more races. Our research does not account for the predominance of any particular racial or ethnic group, but rather the geographic concentration across all groups. In 2019, whites accounted for 61% of the nation's population, Hispanics accounted for about 18%, Blacks 12%, and Asians 5%. The remaining racial groups together accounted for less than 4% of the population (see Table 1).

The Census Bureau divides the country into census tracts, which are small, more-or-less permanent and contiguous areas whose boundaries generally follow visible and identifiable features including highways, rivers, canals and railroads. When counties are segregated, we expect that they are most likely to be divided along similar lines. A racial integration score is calculated for each census tract i based on the following formula:

$$Racial\ Integration\ Score_i = 1 - \sqrt{\sum_{x=1}^8 (Pct_{x,i} - Pct_{x,j})^2}$$

Table 1: Racial Makeup of U.S. Population, 2019

	#	% of total
Total population	324,697,795	100.0%
Hispanic or Latino (of any race)	58,479,370	18.0%
White alone	197,100,373	60.7%
Black or African American alone	39,977,554	12.3%
American Indian and Alaska Native alone	2,160,378	0.7%
Asian alone	17,708,954	5.5%
Native Hawaiian and Other Pacific Islander alone	540,511	0.2%
Some other race alone	789,047	0.2%
Two or more races	7,941,608	2.4%

Sources: Census Bureau ACS, Moody's Analytics

county scores are based on population by race or ethnic group from the Census Bureau's 2015-2019 American Community Survey for all 72,000-plus census tracts in the country for eight races or ethnic groups. This includes non-Hispanic whites, Hispanics or Latino of any race, non-Hispanic Blacks,

American Indian or Alaska Native, Asian, Native Hawaiian or other Pacific Islanders, another race, and two or more races. Our research does not account for the predominance of any particular racial or ethnic group, but rather the geographic concentration across all groups. In 2019, whites accounted for 61% of the nation's population, Hispanics accounted for about 18%, Blacks 12%, and Asians 5%. The remaining racial groups together accounted for less than 4% of the population (see Table 1).

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$$Racial\ Integration\ Score_i = 1 - \sqrt{\sum_{x=1}^8 (Pct_{x,i} - Pct_{x,j})^2}$$

Where:

x = race or ethnic group;

$Pct_{x,i} = Pop_{x,i} / Pop_p$, the share of the population of census tract i that identifies as race or ethnic group x ; and

$Pct_{x,j} = Pop_{x,j} / Pop_j$, the share of the population of parent county j that includes census tract i that identifies as race or ethnic group x .

Census tracts do not cross county boundaries, and therefore for each race or ethnic group x , in every census tract i and parent county j :

$$\sum_{i=1}^n Pop_{x,i} = Pop_{x,j}$$

Where:

n = the number of census tracts in county j .

A county j 's racial integration score is equal to the population-weighted racial integration score of its census tracts:

$$Racial\ Integration\ Score_j = \sum_{i=1}^n (w_i \cdot Racial\ Integration\ Score_i)$$

Where:

n = the number of census tracts in county j ;

$w_i = Pop_i / Pop_j$, the share of the population of county j that resides in census tract i ;

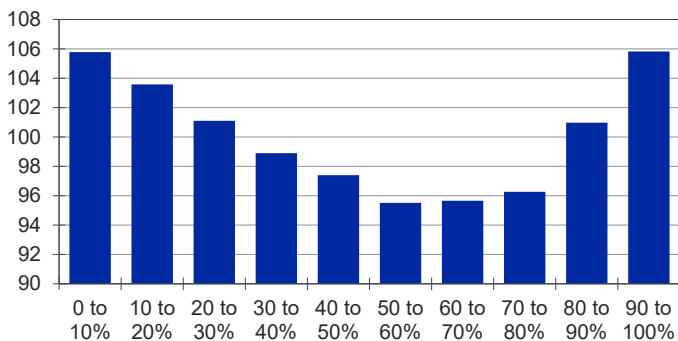
and

$Racial\ Integration\ Score_i$ = racial integration score for census tract i .

To make the racial integration score for a county easier to interpret, it is stated as a percent of the national score, which is a population-weighted sum of the county scores.

Chart 3: Mixed Counties, Less Integrated

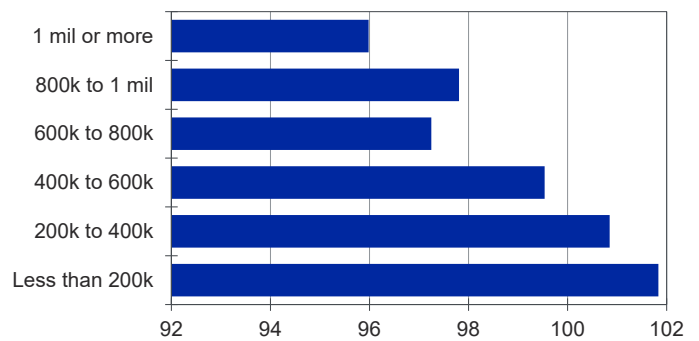
Avg integration score by non-white % of population, 2019



Sources: Census Bureau, Moody's Analytics

Chart 4: Populous Counties, Less Integrated

Avg integration score by county population, 2019



Sources: Census Bureau, Moody's Analytics

A fully racially integrated county is one in which the racial distribution of the census tracts in the county matches the county's racial distribution. Higher scores indicate that a race or ethnic group is less concentrated in the census tract and is more racially integrated. It may be counterintuitive that a census tract with a population that is evenly distributed by race will have a lower racial integration score than a census tract whose racial distribution more closely matches the county that the tract is in. But this result means that the county's racial minorities account for a disproportionately small share of the census tract's residents, while its largest group is overrepresented, probably by a wide margin. Despite its even distribution, we view this census tract as more segregated because of these differences.

For the statistical analysis in this paper we include the 458 counties with 30 or more census tracts, accounting for three-fourths of the nation's population. This helps to ensure that the racial integration score is not driven by any one census tract (see Appendix). Racial segregation is similar across the country. There is no material difference in the population weighted average racial integration score for counties across the Census Bureau's four broad regions. More racially diverse counties are generally more segregated, while the least segregated counties are more than 80% white or non-white (see Chart 3). More populous counties also tend to be more segregated; five of the 10 most segregated counties have more than 1 million residents (see Chart 4). Racial integration as measured by our score has not appreciably changed over the past decade.

To better understand our racial integration score, consider that Wayne County MI, which includes the City of Detroit, is the most segregated highly populated county in the country. It is only 88% as racially integrated as the typical county nationwide. The county is 50% white and 39% Black, but racial enclaves are prevalent. Of the country's 603 census tracts, 159 are more than 80% white and 226 tracts are more than 80% Black. Nationally, there are 20 census tracts with all Black residents, and six of those are in Wayne County, more than any other county in the nation. Other counties in big urban areas that are highly segregated by our measure, include Essex County NJ and Kings and Queens counties NY, which are in the New York City metro area, Cook County IL in the Chicago metro area, Philadelphia County, and Fulton and DeKalb counties GA in the Atlanta metro area.⁹

More populous counties that are among the most integrated are geographically dispersed. Most notable include several Texas counties, including Hidalgo and El Paso on the Texas border with Mexico, and Collin in the Dallas metro area. The Boston and Philadelphia suburbs are also more integrated, including Middlesex County MA and Montgomery County PA, respectively. Several counties in the Pacific Northwest also stand out as more integrated, including Snohomish and Pierce counties in the Seattle and Tacoma metro areas, respectively, and Multnomah County in the Portland OR metro area.

Integration's macroeconomic impact

To assess the macroeconomic impact of racial integration, we model the growth in

real GDP across counties over the decade 2009-2019.¹⁰ This encompasses the expansion after the financial crisis and avoids the impact of the pandemic on our analysis.¹¹ The model controls for dynamic factors such as the growth in population, employment and income, as well as structural factors, including the college-educated share of the population, the share of the population over the age of 65, and the racial integration score.

We estimate three different models of real GDP growth, controlling for geography in different ways. Regardless of the model, we find a strong positive relationship between racial integration and real GDP growth (see Table 2). That is, greater integration results in stronger GDP growth. The estimated strength of the relationship varies somewhat depending on whether we do not control for regional differences (Model 1), we control for regional differences using regional dummy variables (Model 2), or we use interaction terms between regions and the racial integration score (Model 3). The modeling suggests that integration has a similar impact on GDP growth in counties in all regions of the country.

This modeling can also be used to determine how large an impact racial integration across communities has on real GDP. Based on Model 2, which uses regional dummy variables to control for the impact of geography, we find that if Wayne County MI, the most segregated big county in the country, had suddenly become among the most integrated, its real GDP would increase by more than 8% over the subsequent decade, or 0.8% per annum (see Table 3).

More broadly, if communities across the country were able to more fully integrate

Table 2: Racial Integration Impact on Real GDP Growth

	Dependent variable is real GDP growth, 2009-2019		
	Model 1 No regional control	Model 2 Regional dummies	Model 3 Regional interaction
Racial integration score	0.00437*** (0.00138)	0.00401*** (0.00145)	
Integration score*Midwest			0.00414*** (0.00144)
Integration score*Northeast			0.00385*** (0.00146)
Integration score*South			0.00397*** (0.00148)
Integration score*West			0.00413*** (0.00143)
Population chg, %, 2009-19	-0.745*** (0.162)	-0.733*** (0.175)	-0.731*** (0.175)
Population, 2019	3.14e-07 (5.01e-06)	-5.35e-07 (5.33e-06)	-5.03e-07 (5.31e-06)
Employment chg, %, 2009-19	0.785*** (0.123)	0.803*** (0.122)	0.803*** (0.122)
Income chg, %, 2009-19	0.633*** (0.101)	0.606*** (0.101)	0.606*** (0.101)
Share of population, age 65+	-0.00629*** (0.00137)	-0.00585*** (0.00135)	-0.00585*** (0.00135)
Share of population, college degree	-0.0598 (0.0854)	-0.0225 (0.0916)	-0.0244 (0.0916)
Northeast		0.00255 (0.0160)	
South		-0.0282* (0.0170)	
West		-0.0154 (0.0162)	
Constant	-0.345*** (0.129)	-0.308** (0.142)	-0.319** (0.139)
Observations (counties)	453	453	453
R-squared	0.695	0.699	0.699

Notes: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Source: Moody's Analytics

racially and reduce racial bias so that they were comparable to the nation's currently most integrated communities, we estimate that the nation's real GDP growth would accelerate by close to 0.3 percentage point per annum. That is, real GDP growth would increase from 2.4% per annum, which we currently expect over the coming decade under the assumption that racial integration will not materially change, to near 2.7% per annum.¹² This exercise assumes a big change in racial integration, which is not realistic, but even more modest improvements in integration have a meaningful economic benefit. Based on the same Model 2, an increase of

one standard deviation in a county's racial integration score results in a 1.5% increase in the county's GDP growth over the decade, or 15 basis points per annum.

The model of real GDP controls for the growth in employment and population, so it is effectively explaining differences in labor productivity growth across counties with the structural factors, including racial integration. Since real GDP growth is equal to the sum of the growth in labor productivity and the labor force, we also modeled the impact of integration on labor force growth across counties. Our intuition was that greater integration would increase net in-migration into a coun-

ty and lift labor force growth. But that was not borne out in our analysis. Despite using different model specifications, the estimation results did not show a meaningful impact of racial integration on labor force growth.

We also tested whether less racially integrated counties that were predominately white experienced economic growth that differed from less integrated counties that were predominately non-white. We did this by including the share of the non-white population both directly in the model and as interaction term with the racial integration score. We found no difference, as these variables were not statistically significant. Less

Table 3: Impact on Real GDP From Change in Racial Integration

	10-yr impact	1-yr impact
Minimum to maximum	8.1%	0.81%
Median to maximum	2.6%	0.26%
Mean to maximum	2.8%	0.28%
One standard deviation	1.5%	0.15%
50th-75th percentile	1.0%	0.10%
75th-90th percentile	0.7%	0.07%
90th-99th percentile	0.7%	0.07%

Note: These results are based on Model 2, the regional dummy model

Source: Moody's Analytics

integrated counties experienced weaker economic growth regardless of whether they are predominately white or non-white.

Integration and house prices

We also modeled the impact of racial integration on house price growth over the five-year period 2014-2019.¹³ This estimation period is chosen to avoid the housing bust and weak house prices in the wake of the financial crisis. Like the model of GDP growth, the house price growth model also controls for a range of dynamic and structural factors, including racial integration.

Counties that are more integrated enjoy stronger house price growth (see Table 4). In Model 1, which does not control for regional effects, the relationship between segregation and house price growth is statistically strong. In Model 2 and Model 3, which control for regional effects using dummy variables or interaction terms, the impact of the racial integration score on house prices is positive, but not quite as statistically significant. Racial integration has a larger and more significant impact on house price growth in the western part of the country, and about the same in the rest of the country. It is smaller and somewhat less significant in the other regions.

Based on Model 2, which controls for regional differences using dummy variables, we find that if the most segregated county had suddenly become among the most racially integrated, house prices in that county would have increased by close to 7% over five years, or 1.4% per annum (see Table 5). But even a more modest increase of one standard deviation in a county's racial integration score results in a 1.3% increase in the county's house price growth over the five years, or 0.3 percentage point per annum.

Explaining integration's economic impact

While our modeling establishes that racial integration is associated with stronger real GDP and house price growth, this leads us to question why. What are the channels through which increased racial integration leads to stronger GDP and house price growth? We proffer some possible answers to this question in order of most to least convincing to us. This analysis is intended to be suggestive of how racial integration may lift economic growth and does not do this in a formal statistically proven way. Nor does this analysis tackle thorny questions around causality. This is fodder for future research.

Shorter commutes

One intuitive way racial integration may lead to stronger economic growth is through shorter commute times. Workers in more integrated communities generally have shorter commutes to work, supporting labor productivity and the economy's output.¹⁴ The strong relationship between integration and commute times is illustrated in Chart 5, for which we took the 458 counties with 30 or more census tracts and grouped them into deciles by racial integration score—the lowest decile includes the 46 most racially integrated counties, the second-lowest decile includes the next 46 most integrated, and so on. We then calculate the av-

erage racial integration score and the average commute time in each decile and plot the 10 decile pairs. A simple linear regression across the pairs has a 0.73 R-squared.¹⁵ Commuting to work takes 13% less time in the most integrated counties compared with the most segregated, saving the typical commuter approximately \$300 per year.

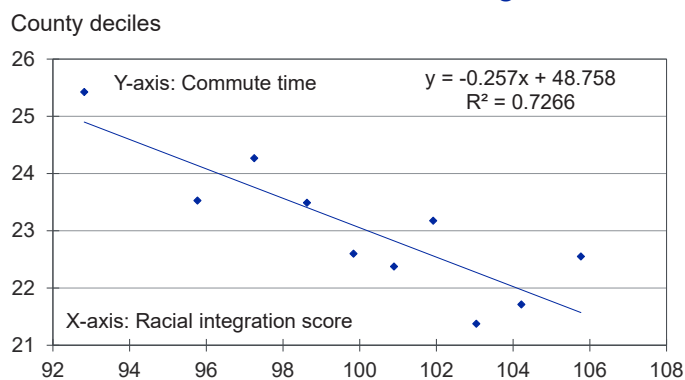
As we previously noted, less populated counties tend to be more integrated. Thus, finding a negative relationship between integration and commute time is not surprising, as counties with fewer commuters will have less traffic and congestion, which reduces daily commute times. The relationship between greater integration and shorter commutes may thus simply be a byproduct of the relationship between fewer commuters and shorter commute time. To test this hypothesis, we ran a simple regression in which county commute times are regressed on population and our racial integration score. The impact of population on commute times is positive and significant even under the strictest test for statistical significance, while the racial integration score is significant, but less so.

While shorter commutes appear to be caused more by a fewer number of commuters and less by more integration, this leaves open the more fundamental question as to why less populated cities are less segregated to begin with.

More credit

More available credit is another way greater integration may result in stronger economic activity. We proxy credit availability in a county by the share of the population

Chart 5: Shorter Commutes in Integrated Areas



Sources: Census Bureau, Moody's Analytics

Table 4: Racial Integration Impact on House Price Growth

	Dependent variable is house price growth, 2014-2019		
	Model 1 No regional control	Model 2 Regional dummies	Model 3 Regional interaction
Racial integration score	0.00514*** (0.00177)	0.00340** (0.00160)	
Integration score*Midwest			0.00332** (0.00157)
Integration score*Northeast			0.00302* (0.00158)
Integration score*South			0.00318* (0.00163)
Integration score*West			0.00435*** (0.00156)
Population chg, %, 2014-19	1.131*** (0.218)	0.945*** (0.267)	0.919*** (0.265)
Population lvl, 2019	2.75e-06 (5.72e-06)	-1.37e-06 (5.21e-06)	-9.99e-07 (5.16e-06)
Employment chg, %, 2014-19	0.387*** (0.140)	0.592*** (0.136)	0.595*** (0.136)
Income chg, %, 2014-19	0.0783 (0.105)	-0.0563 (0.0868)	-0.0551 (0.0867)
Share of population, age 65+	0.000489 (0.00169)	0.000747 (0.00164)	0.000731 (0.00164)
Share of population, college degree	-0.506*** (0.101)	-0.136 (0.0983)	-0.135 (0.0974)
Population (age 15-19) chg, %, 2014-19	-0.540*** (0.110)	-0.475*** (0.0978)	-0.469*** (0.0976)
Government employment chg, %, 2014-19	-0.183* (0.102)	-0.234*** (0.0893)	-0.235*** (0.0894)
Median house price, 2019	0.000203*** (3.67e-05)	2.89e-06 (4.63e-05)	1.28e-06 (4.55e-05)
Northeast		-0.0298** (0.0133)	
South		-0.0153 (0.0205)	
West		0.100*** (0.0232)	
Constant	-0.313* (0.175)	-0.163 (0.159)	-0.155 (0.157)
Observations	323	323	323
R-squared	0.289	0.398	0.403

Notes: Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Source: Moody's Analytics

that has an outstanding consumer loan or lease, including bank and retail credit cards, auto loans and leases, first and second mortgages, and student loans. This is based on credit file data from credit bureau Equifax. Though we do not have county-level data on loans to business, which would likely be more directly related to economic activity, there is good reason to think that access to business

loans is closely related to access to household loans. Moreover, second mortgages and cash-out refinancings on first mortgages are often used to help finance startups and the operations of small companies.

That greater integration is closely related to more credit availability is clear. The R-squared of a simple regression relating our racial integration score to the share of the

population with a loan or lease across the 10 decile pairs is 0.92 (see Chart 6). Even this understates the difference in access to credit, since among households able to get credit, the amount of credit received per household with similar credit characteristics is approximately 14% more in the most integrated counties compared with the most segregated ones.

Table 5: Impact on House Price Growth From Increase in Racial Integration

	5-yr impact	1-yr impact
Minimum to maximum	6.8%	1.37%
Median to maximum	2.2%	0.43%
Mean to maximum	2.3%	0.47%
One standard deviation	1.3%	0.26%
50th-75th percentile	0.9%	0.17%
75th-90th percentile	0.6%	0.12%
90th-99th percentile	0.6%	0.12%

Note: These results are based on Model 2, the regional dummy model

Source: Moody's Analytics

There is substantial research showing that Black and Hispanic families are much less likely than white families to even have a credit score, since those **minorities historically have been less able to get credit**. And of course, getting credit is all but impossible without a score. This is a baneful catch-22. **Efforts to expand scores to more households of color** by improving scoring techniques and using alternative household payment information such as rents and cell phone payments appear especially critical to lifting the financial well-being of these households and the broader economy.

Less crime

More integrated communities have lower crime rates, which may also support stronger economic growth. The relationship between crime and integration can be seen by looking at homicide rates. We use homicide data for metropolitan areas from the **FBI** and county data from the **Centers for Disease Control and Prevention**. The FBI data are given precedence, as its classification of homicide is

narrower than the CDC's. Since most metro areas have more than one county, we apportion the metro area totals across counties by using the relative rates available in the CDC data. If the CDC data are not available for the county, we apportion FBI homicides based on the county's share of the metro area's population.

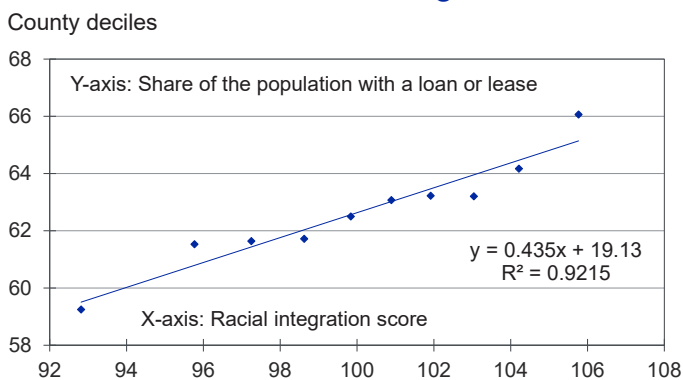
That more integration is associated with fewer homicides is evident in a simple regression relating our racial integration score to the homicide rate across the 10 county decile pairs. The R-squared of the regression is 0.95 (see Chart 7). As with commute times, the relationship between integration and homicides may be because integration is more prevalent in less populous counties where crime is also less of a problem. To test this hypothesis, we ran a simple regression in which county homicide rates are regressed on population and our racial integration score. The impact of population on homicide rates is positive and significant, but so too is the racial integration score, albeit less so.

The relationship between racial integration, crime and economic activity is a complex one. We have shown that greater integration leads to a stronger economy. This results in less crime, as the incentive to engage in illegal activity declines as the legal means of making a living become easier. And more criminal activity hurts the economy, as it acts like a tax on businesses and households, diminishing a community's attraction as a place to live and work. **Higher incarceration rates** also result in lower labor force participation and earnings potential for those who have been in jail. Disentangling all of this is difficult, but there is nothing but economic upside to greater integration and less associated crime.

Bigger companies

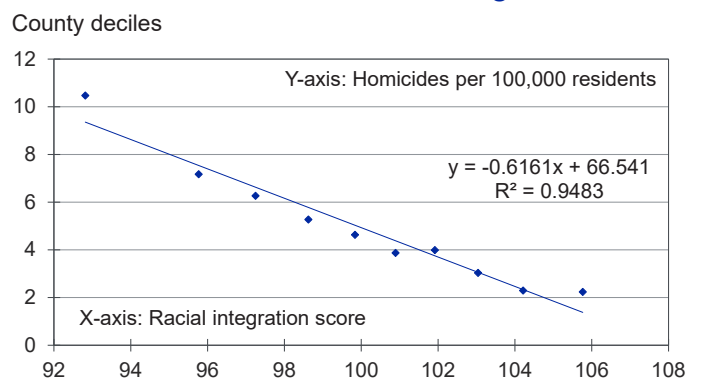
Business activity has become steadily more concentrated in fewer large companies. Smaller mom-and-pop businesses have declined as a share of all companies across much of the country and in most industries,

Chart 6: More Credit in Integrated Areas



Sources: Equifax, Census Bureau, Moody's Analytics

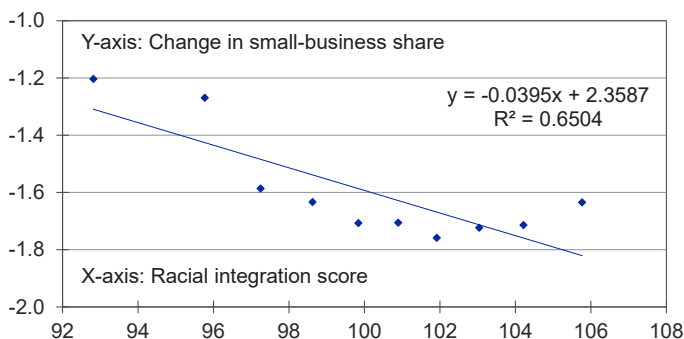
Chart 7: Fewer Homicides in Integrated Areas



Sources: FBI, CDC, Census Bureau, Moody's Analytics

Chart 8: Bigger Companies in Integrated Areas

County deciles



Sources: Census Bureau, Moody's Analytics

especially in retailing and wholesaling, accommodation and restaurants, healthcare, construction, and manufacturing. This is especially so in more racially integrated counties, and less so in segregated ones.

To show this, we use data on the number of establishments by employee size available by county from the Census Bureau's County Business Patterns. That more integration is closely related to more business concentration is clear in a simple regression relating our racial integration score to the change in the share of establishments with fewer than

20 employees across the 10 decile pairs. The R-squared of the regression is 0.65 (see Chart 8).

Greater business concentration has many economic implications, but most pertinent to our analysis is the impact on the operating scale businesses can achieve and thus how productive they are. Greater business concentration and larger companies suggest greater scale, higher productivity, and stronger GDP growth. Integrated communities are more attractive to large, highly productive companies looking for markets with demographics that are more representative of the overall population and a diverse pool of workers.

Conclusions

This paper shows that the more racially integrated our society, the faster our economy will grow—GDP and house price growth are stronger. This is not simply an academic

statistical result that if addressed eventually means a few extra dollars for a few families. It adds up to real money that could substantially improve the long-term financial success of all Americans.

That these compelling economic incentives have been slow to reduce segregation suggests deep-seated impediments to change. Meaningfully lowering these entrenched barriers to racial integration appears unlikely anytime soon without a concerted effort by policymakers to ensure it happens. This means substantially increasing the economic incentives to racially integrate and lifting up families of color.

The wrenching experience of the pandemic may be the political catalyst needed to tackle the economically pernicious problem of racial segregation. Indeed, efforts to address racial inequity more broadly have been taken up in earnest in the national policy debate and risen to the [top of the political agenda](#) for the first time in decades. Martin Luther King Jr. said that ["the arc of the moral universe is long, but it bends toward justice."](#) No question, it is long. But perhaps there is now reason to be hopeful that it is set to meaningfully bend further toward justice.

Appendix: Racial Integration Scores by County 2019

			# of tracts	Population	% non-white	Racial integration score
CT04017	Navajo AZ	West	31	109,270	58.7	86.8
CT26163	Wayne MI	Midwest	603	1,757,299	50.5	88.3
CT34013	Essex NJ	Northeast	210	795,404	69.5	89.5
CT17031	Cook IL	Midwest	1315	5,198,275	57.7	89.6
CT36047	Kings NY	Northeast	752	2,589,974	63.6	90.2
CT42101	Philadelphia PA	Northeast	376	1,579,075	65.5	90.2
CT13121	Fulton GA	South	203	1,036,200	60.4	90.3
CT13089	DeKalb GA	South	144	749,323	70.9	90.4
CT55079	Milwaukee WI	Midwest	296	951,226	48.8	90.8
CT47157	Shelby TN	South	219	936,374	64.2	91.8
CT36081	Queens NY	Northeast	647	2,287,388	75.0	91.8
CT22073	Ouachita LA	South	39	155,494	42.2	91.9
CT39035	Cuyahoga OH	Midwest	443	1,247,451	41.1	92.1
CT01073	Jefferson AL	South	163	659,680	50.1	92.1
CT34031	Passaic NJ	Northeast	100	503,637	58.7	92.1
CT29510	St. Louis city MO	Midwest	106	308,174	56.4	92.1
CT18089	Lake IN	Midwest	117	485,707	45.9	92.2
CT11001	District of Columbia DC	South	179	692,683	63.4	92.4
CT22071	Orleans LA	South	174	390,845	69.3	93.0
CT24510	Baltimore city MD	South	199	609,032	72.5	93.0
CT06037	Los Angeles CA	West	2327	10,081,570	73.8	93.1
CT22017	Caddo LA	South	63	245,831	55.1	93.2
CT34039	Union NJ	Northeast	108	554,033	60.5	93.2
CT51760	Richmond city VA	South	66	226,622	59.2	93.2
CT36061	New York NY	Northeast	283	1,631,993	53.1	93.3
CT22033	East Baton Rouge LA	South	91	443,763	55.4	93.3
CT25025	Suffolk MA	Northeast	197	796,605	55.1	93.5
CT34021	Mercer NJ	Northeast	77	367,922	50.3	93.8
CT48113	Dallas TX	South	528	2,606,868	70.9	94.0
CT29189	St. Louis MO	Midwest	199	996,919	34.0	94.1
CT06053	Monterey CA	West	92	433,410	70.1	94.2
CT48245	Jefferson TX	South	72	254,340	59.4	94.2
CT13215	Muscogee GA	South	53	195,739	59.7	94.4
CT48375	Potter TX	South	33	119,674	55.9	94.4
CT35045	San Juan NM	West	33	126,515	61.8	94.4
CT48201	Harris TX	South	786	4,646,630	70.4	94.4
CT01097	Mobile AL	South	114	414,114	43.1	94.5
CT17089	Kane IL	Midwest	82	531,376	42.9	94.6
CT53077	Yakima WA	West	45	249,697	56.8	94.7
CT25013	Hampden MA	Northeast	103	467,871	37.3	94.9
CT34017	Hudson NJ	Northeast	165	670,046	71.2	94.9
CT37119	Mecklenburg NC	South	231	1,074,475	53.2	94.9
CT06059	Orange CA	West	582	3,168,044	59.4	94.9
CT24005	Baltimore MD	South	211	828,018	42.7	94.9
CT34007	Camden NJ	Northeast	127	506,738	43.3	95.0
CT42045	Delaware PA	Northeast	143	564,554	33.2	95.0
CT13021	Bibb GA	South	44	153,200	61.7	95.1
CT06111	Ventura CA	West	173	847,263	54.6	95.2
CT01125	Tuscaloosa AL	South	47	207,305	38.5	95.2
CT37155	Robeson NC	South	31	132,596	74.9	95.2
CT06029	Kern CA	West	151	887,641	65.8	95.2
CT51087	Henrico VA	South	63	327,535	46.9	95.3
CT06087	Santa Cruz CA	West	52	273,962	42.7	95.3
CT22079	Rapides LA	South	33	130,970	38.8	95.3
CT09003	Hartford CT	Northeast	223	893,561	38.9	95.4
CT36119	Westchester NY	Northeast	222	968,890	46.5	95.4

Appendix: Racial Integration Scores by County (Cont.)

2019

			# of tracts	Population	% non-white	Racial integration score
CT08031	Denver CO	West	143	705,576	45.8	95.4
CT17163	St. Clair IL	Midwest	60	262,338	38.4	95.4
CT01101	Montgomery AL	South	65	226,941	66.1	95.4
CT51740	Portsmouth city VA	South	31	95,097	62.3	95.4
CT44007	Providence RI	Northeast	141	635,737	39.2	95.5
CT39061	Hamilton OH	Midwest	222	813,589	34.8	95.5
CT22019	Calcasieu LA	South	42	201,619	32.6	95.5
CT20209	Wyandotte KS	Midwest	63	164,861	59.1	95.5
CT51710	Norfolk city VA	South	77	244,601	56.6	95.7
CT05119	Pulaski AR	South	94	392,967	47.7	95.7
CT12086	Miami-Dade FL	South	510	2,699,428	86.8	95.7
CT29095	Jackson MO	Midwest	196	696,216	37.8	95.7
CT12099	Palm Beach FL	South	330	1,465,027	45.4	95.8
CT06081	San Mateo CA	West	156	767,423	60.8	95.8
CT34023	Middlesex NJ	Northeast	175	825,920	56.9	95.8
CT12011	Broward FL	South	360	1,926,205	63.7	95.8
CT06001	Alameda CA	West	360	1,656,754	68.6	95.8
CT22051	Jefferson LA	South	124	434,850	47.4	95.8
CT36059	Nassau NY	Northeast	279	1,356,509	40.0	95.9
CT25009	Essex MA	Northeast	162	783,676	29.7	95.9
CT06073	San Diego CA	West	626	3,316,073	54.4	95.9
CT18097	Marion IN	Midwest	224	951,869	44.8	96.0
CT37081	Guilford NC	South	118	527,868	49.7	96.1
CT42077	Lehigh PA	Northeast	76	365,052	35.6	96.1
CT06085	Santa Clara CA	West	372	1,927,470	68.5	96.1
CT34001	Atlantic NJ	Northeast	69	266,105	43.6	96.1
CT09001	Fairfield CT	Northeast	210	943,926	38.3	96.2
CT48439	Tarrant TX	South	356	2,049,770	53.3	96.2
CT34011	Cumberland NJ	Northeast	34	151,906	53.6	96.2
CT06083	Santa Barbara CA	West	88	444,829	55.5	96.2
CT42011	Berks PA	Northeast	90	418,025	28.3	96.3
CT17097	Lake IL	Midwest	152	701,473	38.4	96.3
CT04027	Yuma AZ	West	53	209,468	69.0	96.4
CT06013	Contra Costa CA	West	207	1,142,251	56.2	96.4
CT48157	Fort Bend TX	South	76	765,394	66.9	96.5
CT26049	Genesee MI	Midwest	130	407,875	27.6	96.5
CT24033	Prince George's MD	South	218	908,670	87.3	96.5
CT04013	Maricopa AZ	West	912	4,328,810	44.8	96.5
CT28049	Hinds MS	South	64	238,797	75.5	96.5
CT37067	Forsyth NC	South	93	375,195	43.3	96.5
CT09009	New Haven CT	Northeast	189	857,513	37.1	96.5
CT12095	Orange FL	South	206	1,349,746	60.0	96.6
CT47037	Davidson TN	South	159	687,488	43.8	96.6
CT45079	Richland SC	South	89	411,357	57.7	96.6
CT13139	Hall GA	South	36	198,667	39.2	96.6
CT26145	Saginaw MI	Midwest	56	191,821	30.6	96.7
CT45019	Charleston SC	South	85	401,165	35.5	96.7
CT13051	Chatham GA	South	69	288,496	51.5	96.7
CT39113	Montgomery OH	Midwest	152	531,670	29.3	96.8
CT48453	Travis TX	South	217	1,226,805	51.0	96.9
CT13245	Richmond GA	South	47	201,852	65.5	96.9
CT04019	Pima AZ	West	241	1,027,207	48.3	96.9
CT35049	Santa Fe NM	West	50	149,293	57.2	97.1
CT36029	Erie NY	Northeast	236	919,355	24.5	97.1
CT39049	Franklin OH	Midwest	283	1,290,360	37.0	97.1
CT12021	Collier FL	South	73	371,453	37.2	97.1

Appendix: Racial Integration Scores by County (Cont.)

2019

			# of tracts	Population	% non-white	Racial integration score
CT12031	Duval FL	South	173	936,186	47.1	97.1
CT37063	Durham NC	South	59	311,848	57.5	97.2
CT42043	Dauphin PA	Northeast	65	275,632	34.2	97.2
CT06019	Fresno CA	West	199	984,521	70.6	97.2
CT40109	Oklahoma OK	South	241	787,216	44.0	97.3
CT17197	Will IL	Midwest	151	689,315	36.3	97.5
CT24031	Montgomery MD	South	215	1,043,530	56.2	97.5
CT36087	Rockland NY	Northeast	65	324,422	36.9	97.5
CT48423	Smith TX	South	40	227,449	40.3	97.5
CT36055	Monroe NY	Northeast	191	743,341	29.4	97.6
CT48309	McLennan TX	South	50	251,089	44.1	97.7
CT36005	Bronx NY	Northeast	334	1,435,068	90.9	97.7
CT06075	San Francisco CA	West	195	874,961	59.5	97.7
CT13135	Gwinnett GA	South	113	915,046	62.7	97.7
CT39099	Mahoning OH	Midwest	70	229,961	24.0	97.7
CT27123	Ramsey MN	Midwest	136	544,442	38.1	97.7
CT06071	San Bernardino CA	West	368	2,149,031	71.5	97.7
CT36085	Richmond NY	Northeast	108	474,893	39.0	97.8
CT34035	Somerset NJ	Northeast	68	329,838	43.7	97.8
CT10003	New Castle DE	South	129	556,165	42.6	97.8
CT17143	Peoria IL	Midwest	48	182,770	30.1	97.9
CT13067	Cobb GA	South	120	751,218	48.1	97.9
CT51700	Newport News city VA	South	44	179,673	57.1	97.9
CT31055	Douglas NE	Midwest	156	560,617	30.6	97.9
CT47065	Hamilton TN	South	80	360,919	28.9	97.9
CT51510	Alexandria city VA	South	38	157,613	48.1	98.0
CT45013	Beaufort SC	South	40	186,095	32.1	98.0
CT26021	Berrien MI	Midwest	48	154,133	25.1	98.0
CT12057	Hillsborough FL	South	314	1,422,278	51.2	98.0
CT26125	Oakland MI	Midwest	337	1,253,185	28.0	98.0
CT32003	Clark NV	West	487	2,182,004	57.2	98.1
CT48029	Bexar TX	South	362	1,952,843	72.3	98.1
CT21111	Jefferson KY	South	190	767,419	32.6	98.1
CT06065	Riverside CA	West	452	2,411,439	64.7	98.2
CT51153	Prince William VA	South	82	461,423	57.1	98.2
CT45041	Florence SC	South	32	138,475	48.2	98.2
CT34003	Bergen NJ	Northeast	179	930,390	43.4	98.3
CT37183	Wake NC	South	185	1,069,079	40.0	98.3
CT01089	Madison AL	South	73	362,276	35.3	98.3
CT35001	Bernalillo NM	West	153	677,858	61.3	98.3
CT39095	Lucas OH	Midwest	127	431,102	31.4	98.3
CT06067	Sacramento CA	West	317	1,524,553	55.3	98.3
CT26121	Muskegon MI	Midwest	42	173,297	23.6	98.3
CT22055	Lafayette LA	South	42	241,973	34.3	98.3
CT12073	Leon FL	South	68	289,770	43.5	98.4
CT36103	Suffolk NY	Northeast	322	1,483,832	32.4	98.4
CT01055	Etowah AL	South	30	102,748	22.1	98.4
CT15003	Honolulu HI	West	235	984,821	81.6	98.4
CT12071	Lee FL	South	165	737,468	32.8	98.5
CT15009	Maui HI	West	34	165,979	69.8	98.5
CT06077	San Joaquin CA	West	139	742,603	68.2	98.6
CT24017	Charles MD	South	30	159,428	59.8	98.8
CT51650	Hampton city VA	South	33	135,041	61.8	98.9
CT06095	Solano CA	West	95	441,829	62.0	98.9
CT48041	Brazos TX	South	41	222,981	44.2	98.9
CT37001	Alamance NC	South	36	163,324	35.9	99.0

Appendix: Racial Integration Scores by County (Cont.)

2019

			# of tracts	Population	% non-white	Racial integration score
CT12097	Osceola FL	South	41	351,955	68.3	99.0
CT34005	Burlington NJ	Northeast	114	445,702	32.6	99.0
CT06055	Napa CA	West	40	139,623	47.6	99.0
CT04003	Cochise AZ	West	32	125,867	45.0	99.0
CT17201	Winnebago IL	Midwest	77	284,819	31.0	99.0
CT08005	Arapahoe CO	West	147	644,560	39.7	99.0
CT08001	Adams CO	West	96	504,108	50.0	99.0
CT25023	Plymouth MA	Northeast	100	515,303	19.4	99.1
CT20173	Sedgwick KS	Midwest	124	513,375	31.9	99.1
CT41047	Marion OR	West	58	339,641	34.5	99.1
CT04021	Pinal AZ	West	75	432,793	43.2	99.2
CT13059	Clarke GA	South	30	126,176	45.0	99.2
CT26081	Kent MI	Midwest	128	648,121	26.3	99.2
CT27053	Hennepin MN	Midwest	299	1,245,837	31.2	99.3
CT48303	Lubbock TX	South	67	304,808	46.5	99.3
CT48355	Nueces TX	South	81	361,540	70.5	99.3
CT26161	Washtenaw MI	Midwest	100	367,000	29.9	99.3
CT06099	Stanislaus CA	West	94	543,194	58.1	99.4
CT18141	St. Joseph IN	Midwest	75	270,216	27.4	99.4
CT51550	Chesapeake city VA	South	41	239,982	42.6	99.4
CT05143	Washington AR	South	32	232,289	29.1	99.4
CT17019	Champaign IL	Midwest	43	209,922	32.8	99.4
CT39153	Summit OH	Midwest	135	541,334	23.0	99.4
CT40143	Tulsa OK	South	175	646,419	38.0	99.4
CT06113	Yolo CA	West	41	217,352	53.3	99.5
CT18003	Allen IN	Midwest	96	372,575	26.2	99.5
CT51041	Chesterfield VA	South	71	343,551	38.2	99.5
CT51059	Fairfax VA	South	256	1,145,862	49.3	99.5
CT48027	Bell TX	South	63	348,574	54.2	99.6
CT36067	Onondaga NY	Northeast	140	462,872	23.2	99.6
CT36071	Orange NY	Northeast	79	380,085	35.8	99.6
CT12081	Manatee FL	South	78	384,213	28.8	99.7
CT32031	Washoe NV	West	107	456,936	36.9	99.7
CT37159	Rowan NC	South	30	140,296	28.0	99.7
CT12105	Polk FL	South	153	686,218	41.1	99.7
CT36093	Schenectady NY	Northeast	43	154,859	27.4	99.7
CT24003	Anne Arundel MD	South	104	571,275	31.8	99.7
CT51107	Loudoun VA	South	64	395,134	43.9	99.7
CT12127	Volusia FL	South	113	536,487	28.3	99.7
CT42003	Allegheny PA	Northeast	393	1,221,744	21.5	99.8
CT28047	Harrison MS	South	45	204,502	36.1	99.8
CT55101	Racine WI	Midwest	44	195,602	28.0	99.8
CT06107	Tulare CA	West	78	461,898	71.5	99.8
CT48039	Brazoria TX	South	50	360,677	52.8	99.8
CT53033	King WA	West	397	2,195,502	40.4	99.9
CT36001	Albany NY	Northeast	75	306,968	27.8	99.9
CT48121	Denton TX	South	137	833,822	40.8	100.0
CT48167	Galveston TX	South	66	332,885	42.6	100.0
CT17043	DuPage IL	Midwest	216	929,060	33.1	100.1
CT45083	Spartanburg SC	South	69	307,617	31.7	100.1
CT08123	Weld CO	West	77	305,345	34.4	100.1
CT42079	Luzerne PA	Northeast	103	317,663	18.5	100.3
CT45045	Greenville SC	South	111	507,003	31.7	100.3
CT26065	Ingham MI	Midwest	79	290,587	30.4	100.3
CT48085	Collin TX	South	152	973,977	43.0	100.4
CT17115	Macon IL	Midwest	34	105,528	23.7	100.4

Appendix: Racial Integration Scores by County (Cont.)

2019

			# of tracts	Population	% non-white	Racial integration score
CT12033	Escambia FL	South	71	313,491	35.7	100.4
CT49035	Salt Lake UT	West	211	1,133,646	28.9	100.4
CT37147	Pitt NC	South	32	178,433	45.6	100.4
CT37071	Gaston NC	South	65	219,271	27.5	100.5
CT12001	Alachua FL	South	56	265,443	39.0	100.5
CT48139	Ellis TX	South	31	173,772	39.2	100.5
CT12111	St. Lucie FL	South	43	312,947	42.7	100.5
CT51013	Arlington VA	South	58	233,464	38.5	100.5
CT35013	Dona Ana NM	West	41	216,069	72.8	100.5
CT24027	Howard MD	South	55	318,855	48.0	100.5
CT37051	Cumberland NC	South	67	332,861	56.5	100.6
CT25027	Worcester MA	Northeast	172	824,772	23.6	100.6
CT51810	Virginia Beach city VA	South	99	450,201	38.3	100.6
CT24025	Harford MD	South	57	252,222	23.9	100.6
CT37057	Davidson NC	South	34	165,381	19.8	100.7
CT06097	Sonoma CA	West	99	499,772	36.8	100.7
CT05007	Benton AR	South	49	265,759	26.7	100.7
CT06047	Merced CA	West	49	271,382	72.4	100.7
CT36065	Oneida NY	Northeast	72	229,959	18.0	100.7
CT39093	Lorain OH	Midwest	73	307,670	21.8	100.7
CT48441	Taylor TX	South	37	136,870	36.6	100.8
CT06041	Marin CA	West	55	259,943	28.8	100.8
CT24021	Frederick MD	South	61	251,422	26.5	100.8
CT10005	Sussex DE	South	53	224,384	25.0	100.8
CT12103	Pinellas FL	South	244	964,666	26.0	100.8
CT26025	Calhoun MI	Midwest	39	134,212	22.5	100.9
CT53005	Benton WA	West	36	197,518	29.6	100.9
CT34027	Morris NJ	Northeast	100	493,379	28.6	100.9
CT13117	Forsyth GA	South	45	228,383	28.3	100.9
CT12085	Martin FL	South	34	159,065	21.7	100.9
CT42075	Lebanon PA	Northeast	31	139,729	17.8	100.9
CT12083	Marion FL	South	61	353,526	29.7	100.9
CT47125	Montgomery TN	South	39	200,180	36.7	101.0
CT21067	Fayette KY	South	82	320,601	29.0	101.0
CT17167	Sangamon IL	Midwest	53	196,861	19.7	101.0
CT17161	Rock Island IL	Midwest	40	143,873	28.2	101.0
CT09011	New London CT	Northeast	65	267,390	24.3	101.0
CT42095	Northampton PA	Northeast	68	302,809	23.3	101.0
CT48485	Wichita TX	South	36	131,596	34.7	101.1
CT41067	Washington OR	West	104	589,481	34.3	101.1
CT34025	Monmouth NJ	Northeast	143	621,659	24.8	101.1
CT20177	Shawnee KS	Midwest	43	177,852	26.1	101.2
CT02020	Anchorage AK	West	55	293,531	42.1	101.2
CT19013	Black Hawk IA	Midwest	38	132,393	18.9	101.2
CT25021	Norfolk MA	Northeast	130	700,437	25.1	101.2
CT15001	Hawaii HI	West	33	199,459	69.7	101.3
CT39003	Allen OH	Midwest	33	103,175	19.3	101.3
CT18039	Elkhart IN	Midwest	36	204,558	25.2	101.3
CT45091	York SC	South	46	265,872	29.5	101.3
CT45007	Anderson SC	South	39	198,064	22.6	101.3
CT28033	DeSoto MS	South	33	178,975	35.7	101.3
CT08101	Pueblo CO	West	54	165,982	47.9	101.3
CT53057	Skagit WA	West	30	125,612	25.6	101.4
CT25017	Middlesex MA	Northeast	317	1,600,842	28.1	101.4
CT45015	Berkeley SC	South	44	215,044	36.5	101.5
CT37097	Iredell NC	South	44	175,538	24.0	101.5

Appendix: Racial Integration Scores by County (Cont.)

2019

			# of tracts	Population	% non-white	Racial integration score
CT36027	Dutchess NY	Northeast	79	293,754	28.5	101.5
CT37179	Union NC	South	41	231,053	27.9	101.6
CT48491	Williamson TX	South	89	547,604	40.6	101.6
CT42089	Monroe PA	Northeast	33	168,032	33.9	101.6
CT55059	Kenosha WI	Midwest	35	168,524	24.2	101.6
CT42091	Montgomery PA	Northeast	211	823,823	24.2	101.6
CT53053	Pierce WA	West	172	877,013	33.2	101.6
CT37129	New Hanover NC	South	43	227,938	22.9	101.6
CT10001	Kent DE	South	32	176,699	38.4	101.7
CT49057	Weber UT	West	50	251,498	23.9	101.7
CT26099	Macomb MI	Midwest	215	870,325	21.0	101.8
CT12069	Lake FL	South	56	345,867	30.3	101.8
CT45003	Aiken SC	South	32	168,301	33.8	101.8
CT13063	Clayton GA	South	49	283,538	89.9	101.8
CT19153	Polk IA	Midwest	97	479,612	22.3	101.8
CT48339	Montgomery TX	South	59	571,949	34.0	101.8
CT39139	Richland OH	Midwest	30	121,100	14.5	101.8
CT42071	Lancaster PA	Northeast	98	540,999	18.0	101.9
CT53061	Snohomish WA	West	149	798,808	30.4	101.9
CT18157	Tippecanoe IN	Midwest	37	191,553	24.2	101.9
CT42049	Erie PA	Northeast	71	273,835	15.8	101.9
CT45051	Horry SC	South	71	332,172	22.7	102.0
CT36083	Rensselaer NY	Northeast	42	159,185	16.8	102.0
CT37025	Cabarrus NC	South	37	206,615	34.4	102.1
CT55009	Brown WI	Midwest	54	261,368	19.2	102.1
CT39023	Clark OH	Midwest	44	134,726	15.9	102.1
CT42029	Chester PA	Northeast	116	519,560	20.6	102.1
CT26077	Kalamazoo MI	Midwest	57	262,745	22.6	102.1
CT47149	Rutherford TN	South	49	315,815	29.2	102.1
CT06079	San Luis Obispo CA	West	53	282,165	31.1	102.2
CT37035	Catawba NC	South	31	157,613	24.5	102.2
CT12117	Seminole FL	South	86	461,402	39.7	102.3
CT12009	Brevard FL	South	111	585,507	25.6	102.3
CT12005	Bay FL	South	43	182,161	23.9	102.3
CT08041	El Paso CO	West	130	698,974	30.9	102.3
CT45063	Lexington SC	South	73	290,278	25.1	102.4
CT36063	Niagara NY	Northeast	60	210,820	14.6	102.4
CT25005	Bristol MA	Northeast	125	561,037	18.7	102.4
CT24043	Washington MD	South	32	150,109	21.1	102.4
CT42133	York PA	Northeast	90	445,565	16.6	102.4
CT26075	Jackson MI	Midwest	38	158,636	15.4	102.5
CT41051	Multnomah OR	West	170	804,606	30.3	102.5
CT12019	Clay FL	South	30	211,405	27.3	102.5
CT40031	Comanche OK	South	32	121,762	43.8	102.6
CT26139	Ottawa MI	Midwest	53	286,558	16.2	102.6
CT48141	El Paso TX	South	160	836,062	88.0	102.7
CT22103	St. Tammany LA	South	42	255,155	21.4	102.7
CT47093	Knox TN	South	112	461,104	17.7	102.7
CT37133	Onslow NC	South	31	195,069	33.9	102.7
CT12101	Pasco FL	South	133	524,602	25.4	102.7
CT06025	Imperial CA	West	31	180,701	89.4	102.7
CT55105	Rock WI	Midwest	38	162,152	17.2	102.8
CT39017	Butler OH	Midwest	80	380,019	19.0	102.8
CT39155	Trumbull OH	Midwest	55	200,367	12.9	102.8
CT08013	Boulder CO	West	68	322,510	22.4	102.8
CT42069	Lackawanna PA	Northeast	59	210,652	14.8	102.8

Appendix: Racial Integration Scores by County (Cont.)

2019

			# of tracts	Population	% non-white	Racial integration score
CT18163	Vanderburgh IN	Midwest	49	181,291	16.4	102.8
CT46099	Minnehaha SD	Midwest	42	188,674	17.5	102.8
CT55025	Dane WI	Midwest	105	536,078	20.5	102.9
CT18095	Madison IN	Midwest	37	129,455	15.2	102.9
CT36007	Broome NY	Northeast	55	193,188	16.6	103.0
CT06007	Butte CA	West	51	225,817	28.0	103.0
CT12115	Sarasota FL	South	94	419,496	17.0	103.0
CT37019	Brunswick NC	South	32	131,815	18.1	103.0
CT09007	Middlesex CT	Northeast	36	163,053	16.1	103.0
CT17113	McLean IL	Midwest	41	172,578	20.5	103.1
CT06023	Humboldt CA	West	30	135,940	25.6	103.1
CT34009	Cape May NJ	Northeast	32	93,086	14.7	103.1
CT42027	Centre PA	Northeast	31	161,960	14.6	103.1
CT17119	Madison IL	Midwest	61	264,776	14.9	103.1
CT19163	Scott IA	Midwest	47	172,446	20.0	103.2
CT39151	Stark OH	Midwest	86	372,404	13.6	103.2
CT33011	Hillsborough NH	Northeast	85	413,035	15.6	103.2
CT06061	Placer CA	West	84	385,512	27.3	103.2
CT31109	Lancaster NE	Midwest	74	313,158	18.8	103.2
CT27109	Olmsted MN	Midwest	33	154,809	19.9	103.2
CT27037	Dakota MN	Midwest	95	421,453	21.6	103.2
CT08059	Jefferson CO	West	137	574,798	21.9	103.3
CT36111	Ulster NY	Northeast	47	178,665	20.9	103.4
CT20091	Johnson KS	Midwest	128	591,506	20.1	103.5
CT54039	Kanawha WV	South	53	183,279	12.3	103.5
CT27003	Anoka MN	Midwest	83	350,253	18.7	103.6
CT34015	Gloucester NJ	Northeast	63	291,165	21.5	103.6
CT39165	Warren OH	Midwest	33	229,132	13.8	103.6
CT01117	Shelby AL	South	47	213,432	22.1	103.6
CT36013	Chautauqua NY	Northeast	35	128,496	12.6	103.6
CT25015	Hampshire MA	Northeast	36	161,032	16.3	103.7
CT06017	El Dorado CA	West	42	188,563	22.2	103.7
CT01003	Baldwin AL	South	31	212,830	16.9	103.7
CT31153	Sarpy NE	Midwest	43	181,232	19.0	103.8
CT42017	Bucks PA	Northeast	142	626,806	15.9	103.8
CT39085	Lake OH	Midwest	58	229,954	11.8	103.8
CT51177	Spotsylvania VA	South	30	132,833	31.9	103.8
CT18035	Delaware IN	Midwest	30	115,020	13.2	103.9
CT12091	Okaloosa FL	South	41	203,794	26.4	103.9
CT42007	Beaver PA	Northeast	51	165,833	10.5	103.9
CT04025	Yavapai AZ	West	42	228,067	19.5	103.9
CT53011	Clark WA	West	104	473,252	21.5	103.9
CT41029	Jackson OR	West	41	216,574	19.2	104.0
CT53067	Thurston WA	West	49	279,711	25.0	104.0
CT53035	Kitsap WA	West	54	265,882	23.3	104.0
CT12053	Hernando FL	South	44	186,313	22.5	104.0
CT42085	Mercer PA	Northeast	30	111,518	9.8	104.0
CT04015	Mohave AZ	West	43	207,695	22.7	104.0
CT47165	Sumner TN	South	42	183,437	15.9	104.0
CT37021	Buncombe NC	South	56	256,886	16.5	104.1
CT39057	Greene OH	Midwest	35	166,502	16.2	104.1
CT18105	Monroe IN	Midwest	31	146,461	16.5	104.1
CT27163	Washington MN	Midwest	50	255,938	17.3	104.2
CT19155	Pottawattamie IA	Midwest	30	93,393	12.2	104.2
CT12015	Charlotte FL	South	38	181,067	16.1	104.3
CT49049	Utah UT	West	127	605,490	17.7	104.3

Appendix: Racial Integration Scores by County (Cont.)

2019

			# of tracts	Population	% non-white	Racial integration score
CT37031	Carteret NC	South	36	69,070	13.6	104.3
CT38017	Cass ND	Midwest	33	176,975	14.6	104.4
CT21117	Kenton KY	South	41	165,668	11.5	104.4
CT29047	Clay MO	Midwest	44	242,516	18.9	104.4
CT12109	St. Johns FL	South	39	244,674	17.4	104.4
CT40027	Cleveland OK	South	62	279,274	28.3	104.4
CT17111	McHenry IL	Midwest	52	307,714	18.9	104.4
CT19113	Linn IA	Midwest	45	223,861	14.2	104.4
CT42041	Cumberland PA	Northeast	49	249,328	14.3	104.4
CT41005	Clackamas OR	West	80	410,463	18.1	104.4
CT47187	Williamson TN	South	37	225,389	15.4	104.5
CT18127	Porter IN	Midwest	30	168,636	16.8	104.5
CT53073	Whatcom WA	West	34	220,821	21.1	104.5
CT48061	Cameron TX	South	84	421,666	91.0	104.5
CT49011	Davis UT	West	54	345,767	16.2	104.6
CT39041	Delaware OH	Midwest	35	201,135	15.0	104.6
CT34029	Ocean NJ	Northeast	123	596,415	15.3	104.6
CT42107	Schuylkill PA	Northeast	40	142,674	9.0	104.6
CT55087	Outagamie WI	Midwest	40	185,700	12.5	104.7
CT41039	Lane OR	West	86	373,340	18.2	104.7
CT06089	Shasta CA	West	48	179,212	20.2	104.8
CT18057	Hamilton IN	Midwest	39	323,117	16.3	104.9
CT55133	Waukesha WI	Midwest	86	400,475	11.5	104.9
CT26147	St. Clair MI	Midwest	49	159,247	8.9	105.0
CT48215	Hidalgo TX	South	112	855,176	93.9	105.0
CT42021	Cambria PA	Northeast	42	133,009	7.3	105.0
CT39133	Portage OH	Midwest	35	162,511	10.4	105.0
CT42051	Fayette PA	Northeast	36	131,302	8.2	105.1
CT08069	Larimer CO	West	73	344,786	17.4	105.1
CT25001	Barnstable MA	Northeast	56	213,496	10.7	105.1
CT34037	Sussex NJ	Northeast	41	141,483	13.7	105.1
CT25003	Berkshire MA	Northeast	39	126,425	11.9	105.2
CT23005	Cumberland ME	Northeast	66	292,307	9.7	105.2
CT53063	Spokane WA	West	105	505,505	15.4	105.2
CT50007	Chittenden VT	Northeast	34	162,646	11.5	105.2
CT09005	Litchfield CT	Northeast	51	182,002	11.6	105.3
CT55139	Winnebago WI	Midwest	41	170,411	11.3	105.3
CT29077	Greene MO	Midwest	62	289,756	12.5	105.3
CT39089	Licking OH	Midwest	32	173,750	9.9	105.4
CT30111	Yellowstone MT	West	32	159,008	13.6	105.4
CT08035	Douglas CO	West	61	336,041	17.8	105.5
CT29183	St. Charles MO	Midwest	79	394,290	12.9	105.7
CT42125	Washington PA	Northeast	59	207,212	7.8	105.7
CT27137	St. Louis MN	Midwest	66	199,759	8.9	105.7
CT16001	Ada ID	West	59	456,849	15.3	105.7
CT24013	Carroll MD	South	38	167,699	11.0	105.8
CT36091	Saratoga NY	Northeast	50	228,502	9.6	105.9
CT42129	Westmoreland PA	Northeast	100	352,590	6.2	105.9
CT44003	Kent RI	Northeast	38	163,869	11.7	106.0
CT39169	Wayne OH	Midwest	32	116,099	6.3	106.0
CT26115	Monroe MI	Midwest	38	149,727	8.7	106.0
CT33013	Merrimack NH	Northeast	36	149,917	7.6	106.1
CT23019	Penobscot ME	Northeast	46	151,774	6.4	106.2
CT33015	Rockingham NH	Northeast	64	306,359	7.5	106.2
CT47163	Sullivan TN	South	39	157,050	6.6	106.3
CT36101	Steuben NY	Northeast	30	96,422	6.4	106.3

Appendix: Racial Integration Scores by County (Cont.)

2019

			# of tracts	Population	% non-white	Racial integration score
CT42013	Blair PA	Northeast	34	123,157	5.4	106.5
CT42019	Butler PA	Northeast	44	186,899	5.3	106.5
CT17179	Tazewell IL	Midwest	30	133,195	6.1	106.5
CT39103	Medina OH	Midwest	37	177,980	6.2	106.6
CT29099	Jefferson MO	Midwest	42	223,951	5.6	106.6
CT48479	Webb TX	South	61	273,526	96.5	106.7
CT23031	York ME	Northeast	40	204,316	5.8	106.7
CT39025	Clermont OH	Midwest	39	204,275	6.5	106.7
CT26093	Livingston MI	Midwest	61	189,754	5.7	106.8
CT23011	Kennebec ME	Northeast	31	121,753	5.4	106.9

Sources: Census Bureau, Moody's Analytics

Endnotes

- 1 Racial integration is the integration across geographies of racial and ethnic groups. The groups included in our analysis are defined by the [Office of Management and Budget](#).
- 2 This is despite massive government support during the pandemic totaling an [estimated more than \\$5 trillion](#), equal to close to 25% of the nation's GDP. This compares with fiscal support of less than 10% of GDP during the financial crisis, and is almost double the amount of government support provided by Japan during the pandemic, the next closest country to the U.S. Even with this support the [finances of minority businesses and households were still hit disproportionately](#) hard during the pandemic.
- 3 [Racial segregation remains endemic](#) despite legal and other efforts to address it, beginning with the 1954 landmark Supreme Court ruling in [Brown v. Board of Education](#) that declared segregation unconstitutional in the nation's educational system.
- 4 This is based on the Moody's Analytics September 2021 baseline outlook for the U.S. economy for the period 2021-2031.
- 5 Black and Hispanic workers are more likely to work in industries that were hit hardest by the pandemic, including leisure and hospitality, retailing, recreational activities, healthcare, and personal services. U rate is the unemployment rate, and part rate is the labor force participation rate.
- 6 This is based on the Federal Reserve's Survey of Consumer Finances. Median household net worth is the difference between what assets households own and what debt and other liabilities they owe. Half of households have a higher net worth than the median and half a lower net worth.
- 7 We do not formally link segregation with racial bias, but they are [closely related](#).
- 8 We do not calculate a racial integration score for the 238 rural counties in the U.S. that have only one census tract. Other recent efforts to measure racial segregation include those by the [Census Bureau](#) and [WalletHub](#).
- 9 Our racial integration scores show a very similar pattern of segregation across the country as in the research done by Berkeley's Roots of Structural Racism Project. Both show that segregation is greatest in the East North Central and Mid-Atlantic census regions, and the lowest in the Mountain and West North Central regions.
- 10 Due to data availability, this model is based on 453 counties.
- 11 We use [county-level real GDP](#) data estimated by the Bureau of Economic Analysis.
- 12 This is the Moody's Analytics June 2021 baseline forecast for the decade ending in 2031.
- 13 We use [Case-Shiller repeat-sales house price indexes](#) for single-family homes. Due to data availability the house price model is based on 323 counties.
- 14 We calculate median commute times by county based on data from the Census Bureau's 2015-2019 American Community Survey. The Census Bureau does not provide estimates for counties, but instead provides estimates of the number of commuters whose travel time to work in minutes falls within specified ranges or bins. We sort these bins from the shortest to longest commute time and calculate the cumulative distribution of these ordered estimates. Assuming that commuters are uniformly distributed throughout the median bin, we estimate the median commute time according to the following formula:

$$\text{median commute time} = \text{minutes}_{x-1} + \frac{0.5 - \text{dist}_{x-1}}{\text{dist}_x - \text{dist}_{x-1}} \times (\text{minutes}_x - \text{minutes}_{x-1})$$

Where:

x = the bin that contains just more than 50% of cumulative commuters;

$x-1$ = the bin that contains just less than 50% of cumulative commuters;

dist = the cumulative distribution of bin x ; and

minutes = the upper bound of bin x 's commute time in minutes plus one (for example, 25 when the bin is 20 to 24 minutes)

The median commute time nationally based on this calculation is just over 23 minutes.

- 15 Using decile pairs eliminates outliers in the relationship being observed, making the visual correlations easier to see and increasing the goodness-of-fit in the regression.

About the Authors

Mark Zandi is chief economist of Moody's Analytics, where he directs economic research. Moody's Analytics, a subsidiary of Moody's Corp., is a leading provider of economic research, data and analytical tools. Dr. Zandi is a cofounder of Economy.com, which Moody's purchased in 2005.

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