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The Role of Kinship in Racial Differences in Exposure to Unemployment

Xi Song and Hal Caswell

ABSTRACT Most studies on unemployment have assessed its individual-level costs. However, beyond its effects on individuals, unemployment incurs costs for their immediate families and extended kin. Close kin provide the majority of social support for unemployed adults. Applying demographic and statistical techniques to official statistics and using COVID-19 survey data on kinship and labor force experience, we assess the unemployment level and exposure to unemployment in the United States from a kinship perspective. The results indicate dramatic racial disparities in the number of unemployed kin and the number of kin affected by an unemployed person. Specifically, during the pandemic-induced recession, Black Americans had 1.7 unemployed people in their extended family compared with 1.2 among Whites. Further, every job loss in a Black extended family affected approximately 23 related members of the family through kinship ties, compared with approximately 20 among Whites. The racial gap in the number of unemployed kin is evident in all age-groups and escalates with age. This study’s findings highlight the need to understand unemployment and its demographic implications, which are stratified by race.

KEYWORDS Kinship • Unemployment • Race • Formal demography

Introduction

An individual’s employment status affects not only the individual but also others with whom they have relationships, particularly kin. Labor market shocks will affect a person with many unemployed kin differently than a person with few unemployed kin. Our goal in this study is to show how to calculate employment status in a kinship network implied by U.S. demographic rates, compare this result between White and Black Americans, and explore the unequal impacts of increased unemployment related to the COVID-19 pandemic on Black and White families.

The U.S. economy was significantly damaged during the coronavirus pandemic, with millions of jobs lost. In April 2020, the unemployment rate jumped to 14.7%—a 10.3-percentage-point increase over the March rate—and the employment-to-population ratio dropped to a historic low of 51.3% (dating to 1948), marking the worst economic crisis since the Great Depression (U.S. Bureau of Labor Statistics)
Job losses, layoffs, furloughs, and unpaid leave have affected workers, employers, and the entire country. The high unemployment rate may continue for years as a consequence of the recession. Widely used statistics on unemployment rates may understate the economic distress caused by job loss to workers and their households, families, and broader kin networks.1 Individuals’ lives are embedded in kinship relations that provide them with economic and emotional support. However, the extent to which the recent economic change has weakened kin relations as a result of declining employment opportunities remains unknown.

Previous research has examined racial gaps in the incidence, duration, cumulative risk, and type of unemployment, but it has largely ignored the connectedness of unemployment within extended families. We argue that unemployed individuals are likely to have kin who are also unemployed (also see, e.g., Nordenmark 1999). For example, among families with an unemployed member in 2020, 32.4% had no family member living in the same household who was employed. This percentage is much higher among Black families (42.9%) than White families (30.1%), suggesting that the higher unemployment rate among Black workers is associated with a higher chance of a whole household being unemployed (BLS 2021: table 1). Moreover, job loss influences not only the unemployed worker but also their family and extended family, whose economic lives may be closely intertwined. Official statistics and survey estimates typically report unemployment rates by aggregating individual data (e.g., BLS 2020a), but these data do not contain information about the overall number of family members, especially beyond the household, who are currently unemployed or whose lives would be affected by another member’s unemployment. Overlooking this clustering in extended family networks could lead policymakers and researchers to underestimate the adversity experienced by the disadvantaged group.

We focus on Black–White differences in exposure to unemployment, given that the unemployment rate among Black Americans has typically been twice that of Whites in recent decades. Between January 1972 and December 2019, the average monthly unemployment rate was 11.8% for Black workers versus 5.5% for their White counterparts. The ratio of these two rates has remained stable over time (Couch and Fairlie 2010; Fairlie and Sundstrom 1997; Smith et al. 1974; Welch 1990), despite the progressive increase in the levels of education and earnings among the Black population relative to Whites over the same period (Couch and Daly 2002; Welch 2003). However, this study shifts the focus from headline unemployment rates, which are the official statistics most widely used in academic research and most commonly featured in media reports, to two new statistics that reflect the level of unemployment from a kinship perspective. Following Keyfitz and Caswell (2005), we define kinship based on reproduction, including parents, grandparents, great-grandparents, children, grandchildren, great-grandchildren, aunts and uncles, nephews and nieces, and cousins. Our definition excludes stepchildren, adopted children, and other relatives by marriage, even though changing trends in fertility and family formation lead to ambiguity about “who is in the family” (Seltzer 2019). We report the expected number of kin members who are unemployed or are related to an unemployed worker—two

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1 In this article, unemployment and job loss are used more or less interchangeably. Job loss typically refers to a discrete event caused by “involuntary separation that occurs when workers are fired or laid off,” whereas unemployment refers to a state of being jobless but actively looking for work (Brand 2015:360).
new statistics that provide a demographic perspective to examine unemployment. We conduct separate analyses for adults and children. Although children are not involved in (un)employment, they are affected by their parents’, siblings’, grandparents’, and other family members’ unemployment.

We combine novel demographic methods of kinship analysis with the research imperative to investigate racial inequality in economic opportunities. Building on age-structured kinship theory, we infer the current kinship network distribution in the United States from the past fertility and mortality histories of Black and White Americans in different age-groups. This approach allows us to evaluate racial differences in the exposure to unemployment resulting from unequal kinship size, composition, and employment status.

Our findings demonstrate a significant Black–White gap in the number of unemployed kin as a result of the general deterioration of job prospects among Black Americans, especially during the pandemic-induced economic crisis. On average, Black people have 1.7 unemployed extended family members, compared with 1.2 among Whites—a difference of more than 40% and one larger than the difference in absolute kinship sizes between races (15%). This racial difference is more salient among older than younger adults. In addition, economic inequality by race is exaggerated by the larger kinship network among Black Americans than among Whites, suggesting that inequalities would remain even if future policies succeed in reducing the racial gap in unemployment at the individual level. Every job loss affects approximately 23 Black individuals but only 20 White individuals who are related to the unemployed person through kinship ties. Our analyses of children show a slightly higher number of unemployed kin among Black children than among White children (1.2 vs. 1) and no age pattern of the racial disparity.

As Watkins et al. (1987) argued, demography is the foundation of social change. Although the economy is beginning to recover following an easing of the pandemic lockdown and many new job opportunities have emerged, demographic change experiences a slower pace. Demography as a multiplier will continue to aggravate economic hardship for Black individuals and their families. We comment on the potential policy implications of this result, which suggests persistent racial inequality.

Background

Changing U.S. Family Demographics and Kinship

Recent U.S. demographic transitions have transformed American kinship. Multi-generational relations are increasingly important because of increases in years of shared life between family members, the decline of the modern nuclear family, and the increasing reliance on support from kin over the life course (Bengtson 2001; Uhlenberg 2004). For example, the expected number of years a person could expect to spend with any grandchild increased markedly, from less than 5 years in 1900 to almost 35 years in 2010 (Song and Mare 2019). Vertical kinship ties along the generational ladder enhance and sometimes replace the role of the nuclear family (Cherlin and Furstenberg 1986; Hayslip and Kaminski 2005; King and Elder 1997; Silverstein and Marenco 2001; Song 2016).
Many families today experience diminished social functions and structures because of high divorce rates, multipartner fertility, and nonmarital births (Cancian et al. 2011; Carlson and England 2011; Kennedy and Ruggles 2014). Yet, from the perspective of the extended family, multigenerational relationships are more prevalent and more pertinent to well-being because of the ubiquity of unexpected life transitions. A growing body of research has documented changes in American kinship and its historical patterns, causes, and variations among social and demographic groups (Margolis and Verdery 2017; Park et al. 2019; Verdery and Margolis 2017). However, relatively little work has examined the consequences of the demographic transition of kinship on evolving economic inequalities between social groups. One exception is the recent study by Verdery et al. (2020), demonstrating the effects of kinship structure on the experience of the death of a close family member during the COVID-19 pandemic. They found that each death from COVID-19 left roughly nine individuals bereaved, including parents, grandparents, siblings, children, and spouses.

The cascading effect of a death or another traumatizing life event on the population thus works through tight-knit kinship networks, leaving many individuals vulnerable to the loss of social and economic support from kin.

Kinship provides a safety net for family members during times of need (Cherlin and Seltzer 2014). Family members provide all types of support, including money, goods, property, knowledge, shared housing, and care for family members at young or old ages and family members who are sick (Seltzer and Bianchi 2013). Kin can also play symbolic roles: the importance of one’s family may lie not only in their actions but also in their presence and what they mean for the family as a unit (Bengtson 1985). A strong support system, even a latent one, can give individuals a sense of security, safeguarding them against making unwise decisions regarding education, career, and relationships while helping them navigate new life opportunities.

Individuals are not equally close to all their kin. Factors such as the degree of relatedness, geographic proximity, emotional intimacy, and shared socioeconomic, demographic, and personality characteristics affect the amount and types of resources exchanged between family members (Furstenberg 2020; Furstenberg et al. 2020; Seltzer 2019). It is impossible to study each family individually. However, we can describe the population average from a demographic perspective that emphasizes the overall patterns of kinship structure—that is, the number and age composition of various types of kin—as a necessary condition for the provision of social support. Verdery and Margolis (2017) showed a dramatic increase in the kinless population of Americans. This demographic trend may have increased the proportion of the population, especially among older adults, who show signs of social isolation, loneliness, and other health problems (Dykstra 1990). However, subpopulations or age-groups with a larger kinship network may also be burdened with a greater obligation to provide support to their kin. Cornwell et al. (2009) showed that older adults, ethnic minorities, and individuals who are poorly educated are more likely to report a higher proportion of kin in their close social networks. The increasing dependence on kin may have led to a growth in the population facing competing demands for finances.

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2 A formal demographic analysis of data from Japan showed that changes in mortality and fertility can produce dramatic shifts in the experience of the death of kin (Caswell 2019).
and time from multiple generations (Friedman et al. 2017; Wiemers and Bianchi 2015). Overall, changing fertility, longevity, and union formation patterns over the past century have transformed the availability of kin (i.e., the number and type of kin and the years of shared lives), leading to greater population heterogeneity and demographic inequality among families. This demographic transition, in turn, influences social inequality, including the occurrence and consequences of unemployment, the focus of the present study.

Racial Differences in Kin Availability and Support

We identify race as an important indicator of kinship network compositions and dynamics given Black–White differences in demographic patterns and socioeconomic status. In her classic book on Black communities, Stack (1975) found that Black families, especially poorer ones, are deeply immersed in webs of kin on whom they rely. In addition to exchanging goods and services daily, Black kin also help one another survive through such difficult situations as job loss, eviction, incarceration, and the death of a family member. Using demographic statistics from the U.S. Census, previous studies found that Black individuals are more likely to reside with their extended family members, live close to extended family, and have more available kin than Whites (Hogan et al. 1990; Ruggles 1994, 2007). These demographic conditions facilitate resource flows through kinship networks. Cultural and attitudinal differences by race also suggest that Black individuals have a greater sense of filial responsibility than Whites (Burr and Mutchler 1999; Lee et al. 1998) and provide particular practical support to their kin, such as help with transportation, household work, and childcare (Sarkisian and Gerstel 2004). Demography, family organizations, and economic inequality jointly shape racial gaps in the demand and supply of kin support.

However, the literature also abounds with contradictory evidence regarding racial differences in kin relationships, reflecting that kin availability does not always predict the amount of kin contact and support. Most Black families have more kin but fewer financial resources, constraining the support that kin can supply in relation to needs and available resources (Fuller-Thomson et al. 1997). Hogan et al. (1993) showed that Black adults, on average, receive less assistance from their kin than Whites because Black adults often have other family members competing for the same support. Desmond (2012) argued that the disposable ties that strangers and new acquaintances form are often more important than domestic ties between kin during emergencies or other unexpected adversities. In addition, family instability resulting from higher rates of divorce and nonmarital childbearing among the Black population often attenuates the latent safety net provided by Black kin, especially on the father’s side (Silverstein and Bengtson 1997). In this study, we estimate differences in kinship composition by race, which may illuminate inequality in the exact support exchanged among kin in times of need. Although not all family crises, including instances of unemployment, will activate the kin effect, race remains a main driver of stratification in kinship dynamics. The interplay between race and kinship composition reinforces economic inequality and poverty in American society.
Unemployment During the Pandemic Economic Crisis

The COVID-19 pandemic evoked massive unemployment crises worldwide, exacerbating the economic, physical, psychological, behavioral, and relational vulnerability of tens of millions of workers and existing inequalities in the labor market. By March 2020, all U.S. states had implemented social distancing restrictions, such as lockdowns, stay-at-home mandates, and closures of nonessential businesses. Millions of workers experienced job losses, layoffs, and furloughs, which intensified stresses from social isolation and childcare demands. Further, unemployment widened inequality between privileged and historically marginalized subpopulations. Virus infection, susceptibility to disease, and mortality rates are higher for disadvantaged groups, including the weak, the old, and the poor, but these groups are also more likely to bear the brunt of an economic downturn.

A large body of research has demonstrated the devastating effects of unemployment on workers’ all-cause mortality (Hanisch 1999; Roelfs et al. 2011) and social well-being (Brand 2015; Burgard et al. 2009). Like other spells of unemployment caused by economic fluctuations, the pandemic-induced unemployment crisis may have had unequal consequences for Black and White Americans. From an individual perspective, the evidence is mixed. Fairlie et al. (2020) showed that Black workers’ jobs were not disproportionately impacted by COVID-19 relative to those of Whites. The Black–White gap in unemployment rates increased only 0.4% from February to April 2020, and the Black-to-White unemployment ratio declined relative to the Great Recession period. However, Black workers are still more likely to hold precarious jobs, to experience permanent involuntary layoffs, and to have had more limited savings and wealth before the pandemic, making them more vulnerable to financial shocks (Hawkley et al. 2020; Wrigley-Field and Seltzer 2020). Further, unemployment often affects Black families more severely than White families (Wilson et al. 1995). In 2020, Black children were more likely than White children to live in families with one or both parents unemployed. Parolin (2020) showed that before the pandemic, 8% of Black children lived with one unemployed parent, and 5.4% lived with both parents unemployed; comparative figures for White children were 4.2% and 1.5%, respectively. These numbers hit a peak in April 2020: the share of Black children with one unemployed parent reached 23.6%, compared with 19.1% of White children. The consequences of unemployment for families are immediate and far-reaching, leading to food insufficiency, missed rent or mortgage payments, and anxiety (Kalil et al. 2020). Families also face an increased childcare burden in tandem with a lack of income support, with long-term consequences on child development and well-being.

In addition to its direct effects on workers and their young children, unemployment may have ripple effects on workers’ extended families. Black families are particularly close-knit, potentially exacerbating the spillover effects of unemployment during economic recessions (Cherlin et al. 2013). Income loss curtails resources available in the kinship network and may even lead to a weakening of family ties (Desmond 2012). Previous research predominantly focused on the effect of unemployment on workers’ immediate family and household members. However, unemployment’s consequences may reach beyond the household. We examine the recent increase in the share of Black families with unemployed kin with reference
to the racial gap in the kinship size of the unemployed population. Although potential exposure to unemployed kin is not equivalent to unemployment effects, many social interactions and influences operate through kinship ties. Thus, our analysis offers a potential explanation of why the seemingly stable or even declining racial gap in unemployment rates in recent years has not yet translated into improvements for the Black population.

Unemployment Measures From a Kinship Perspective

Previous research on unemployment has relied on the unemployment rate reported in official statistics, assessing the percentage of the labor force population currently not employed: it is a measure of unemployment risk. For example, the overall unemployment rate in April 2020 was 13.5%, suggesting that roughly 1 of every 7 or 8 individuals in the labor force had lost their jobs and were actively looking for work. This measure provides a direct estimate of the impact of unemployment on individuals, but it does not speak to the consequences of unemployment on the worker’s family or extended family, some of whom may depend on economic support from that worker.

We offer two new measures that help evaluate the consequences of unemployment. First, the total lives affected (TLA) is a measure of the estimated average number of individuals whose lives may be affected by a kin member’s job loss. This measure refers to an unemployed worker’s number of kin. It is not a direct measure of unemployment but suggests the size of the population that is affected by unemployment.3

Second, we consider total lives unemployed (TLU), which estimates the average number unemployed in a person’s kinship network. This estimate indicates the number of an individual’s unemployed kin regardless of the individual’s employment status. The measure indicates the consequences of clustered unemployment in extended families in which kinship exchanges of time, caregiving, and money are common (Bianchi et al. 2008). The TLU measure is particularly useful for evaluating the impact of unemployment on children, whose well-being is closely related to economic loss and psychological stress associated with the job displacement of their parents and extended family members (Brand and Simon Thomas 2014; Johnson et al. 2012; Kalil and Ziol-Guest 2008). TLU can also be converted to a prevalence measure, indicating the proportion of a person’s kin group that is unemployed at a particular time.

The implementation of these two new measures faces potential, albeit not insurmountable, data and methodological challenges. First, the measures require a combination of demographic data and unemployment data: either direct estimates of kinship size in observational data or indirect estimates of the number of family members or kinship size based on demographic methods. Few surveys inquire about nonresident extended family members. Although the Panel Study of Income Dynamics (PSID) collected some information on kin relationships, the data are far from complete—grandparents, grandchildren, cousins, nephews, nieces, and other relatives who do not live in the same household with respondents are typically unobserved (Park et al.

3 Verdery et al. (2020) recently developed a similar measure (the bereavement multiplier) to estimate the average number of Americans who will experience the death of a close relative for each COVID-19 death.
Daw et al. (2016) provided a method to estimate nonresident kin by linking extended family members in the PSID using the Family Identification Mapping System. Yet, because of the small sample size and relatively short time coverage of the PSID, the results are more complete for descendants of the PSID respondents in 1968 than for their ancestors.

Second, current methods for estimating kinship rely on complicated microsimulations that build on hundreds of parameters but lack a closed-form expression (Murphy 2010; Ruggles 1993; Wachter et al. 1997) or recursive integration equations (Goodman et al. 1974, 1975; Smith-Greenaway et al. 2021; Song and Mare 2019). Such methods create barriers to scholars and policymakers seeking quick answers regarding readily available information about the patterns and consequences of unemployment. To address these issues, the present study defines measures for TLA and TLU using simple parameters derived from matrix population models.

Methods

We use our recent extension of the matrix analytic kinship model introduced by Caswell (2019, 2020) to include time-varying demographic rates (Caswell and Song 2021). The time-varying model allows fertility and mortality rates to vary over time. Kin presence in the United States has changed dramatically in recent decades because of these demographic changes. Chung and Alexander (2019) and Caswell and Song (2021) showed that kinship models based on time-invariant and time-varying rates can lead to significantly different estimates of kinship because the assumption of stable rates is often violated.

Before Caswell’s matrix approach, the foundation of kinship analysis was the work of Goodman et al. (1974), who derived the expected number of kin of various kinds at each age of a focal individual (who we call Focal, following Caswell and Song 2021) by integrating over all the pathways by which Focal could accumulate living kin at a given age. Because the resulting multidimensional integrals are challenging to implement, limited in the information they can provide, and difficult to extend, this method has not been widely used (for exceptions, see Alburez-Gutierrez et al. 2019; Alburez-Gutierrez et al. 2020; Coresh and Goldman 1988; Goldman 1978, 1986; Keyfitz 1986) or developed further (Burch 2018; Pavard and Coste 2020).

The matrix kinship model recognizes that the kin (of any specified kind) of Focal (at any specified age) represent a population that is governed by birth and death processes. The model replaces the complicated multiple integrals of the Goodman et al. (1974) method with a projection of the kin population using the well-known matrix formulation of the cohort-component method (e.g., Caswell 2001; Keyfitz 1964; Wachter 2014:98–124). A kin population is said to be subsidized: new members of the population of one type of kin do not come from the reproduction of those kin but

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4 For example, the Roster and Transfers Module in the 2013 PSID asked all respondents to provide information about their parents, stepparents, parents-in-law, children, and stepchildren irrespective of whether these individuals lived in the respondent’s household (Park et al. 2019).
from the reproduction of some other type of kin. New sisters of Focal, for example, arise not from her current sisters’ reproduction but from her mother’s reproduction. This kinship model provides both the number of kin and their age structure, from which a variety of population properties (e.g., mean ages of kin, the prevalence of conditions of kin) can be calculated. The matrix kinship model has been further generalized to include both dead and living kin, multistate models, and time-varying rates. In all cases, the calculations can be reduced to the same form as the single-state, time-invariant case.

**Kinship With Time-Varying Rates**

Here, we briefly describe the time-varying kinship model; for details, see Caswell and Song (2021). We construct the population projection by incorporating the mortality schedule at time \( t \) into a survival matrix \( U_t \) and incorporating the fertility schedule at time \( t \) into a matrix \( F_t \), both of dimension \( \omega \times \omega \) (i.e., the number of age-groups). For example, with \( \omega=3 \), we have

\[
U_t = \begin{pmatrix} 0 & 0 & 0 \\ p_{1t} & 0 & 0 \\ 0 & p_{2t} & \left[p_{3t}\right] \end{pmatrix}, \quad F_t = \begin{pmatrix} f_{1t} & f_{2t} & f_{3t} \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{pmatrix}, \tag{1}
\]

where \( p_{it} \) and \( f_{it} \) refer to age-specific survival probabilities and fertility rates, respectively, in the year \( t \), and the optional \((\omega, \omega)\) cell in \( U_t \) creates an open final age interval.

Let \( k(x, t) \) denote the age distribution vector for some specified type of kin at age \( x \) of Focal at time \( t \). The kin at age \( x+1 \) of Focal at time \( t+1 \) are the survivors of the kin of age \( x \) at time \( t \). These survivors are obtained by multiplying the age distribution \( k(x, t) \) by the survival matrix \( U_t \). New individuals are produced according to a subsidy vector \( \beta(x, t) \), so that

\[
k(x+1, t+1) = U_t k(x, t) + \beta(x, t), \quad x=0, \ldots, \omega, \quad t=0, \ldots, T. \tag{2}
\]

The recruitment subsidy vector \( \beta(x, t) \) has one of two forms. If there are no new kin of this type (e.g., Focal cannot accumulate a new older sister), then

\[
\beta(x, t)=0. \tag{3}
\]

Alternatively, if new kin are produced by some other type \( k^* \) (e.g., granddaughters of Focal produced by the fertility of the children of Focal), then new recruits are produced by applying the fertility matrix \( F_t \) to \( k^*(x, t) \), so that

\[
\beta(x, t) = F_t k^*(x, t). \tag{4}
\]

The dynamics in Eq. (2) require us to specify a set of boundary conditions specifying the starting point of the calculations. We need a set of kin vectors at \( t=0 \) for every age \( x \) of Focal,

\[
k(x, 0), \quad x=0, \ldots, \omega, \tag{5}
\]
and initial age vectors at age 0 of Focal at every time,
\[ k(0, t), \quad t=0, \ldots, \omega. \] (6)

We specify the boundary conditions as follows.

- To calculate the time boundary \( k(x, 0) \), we assume that the rates \( U_0 \) and \( F_0 \) at the beginning of the study have been operating for a long time. We use the time-invariant calculations based on these rates to generate the vectors \( k(x, 0) \) for all \( x \).
- To calculate the age boundary \( k(0, t) \), we encounter two possibilities. If there are no kin of this type at the birth of Focal, then
\[ k(0, t) = 0, \quad t=0, \ldots, \omega. \] (7)

If kin are possible, we follow Goodman et al. (1974) and calculate the age distribution of mothers at childbirth at time \( t \) in the stable population defined by the rates \( U_t \) and \( F_t \), giving a time-dependent distribution \( \pi(t) \). The initial condition is calculated as
\[ k(0, t+1) = \sum \pi_i(t) k^*(i, t), \] (8)
where \( k^* \) is the appropriate other kind of kin.

Chung and Alexander (2019) developed a time-varying kinship model for a subset of kin using the original Goodman et al. (1974) method with multidimensional integrals. They derived formulas only for vertical kin (daughters, granddaughters, mothers, and grandmothers), whereas our general formulation can be applied to the full set of kin.

**From Female Kin to Total Kin: An Approximation**

Kinship models since Goodman et al. (1974) have calculated female kin through female lines of descent (e.g., daughters, daughters of daughters). To obtain the total kin numbers, we would need to calculate male and female kin through all possible lines of descent (female, male, and mixed). Given that no theory exists to guide this process (see Caswell 2022), we approximate the overall number of kin using a method introduced by Goodman et al. (1974) that treats male and female rates as identical. This approximation calculates children as two times the number of daughters, and grandchildren as four times the number of granddaughters; it multiplies great-granddaughters by eight, mothers by two, grandmothers by four, great-grandmothers by eight, sisters by two, nieces by four, aunts by four, and cousins by eight.

**Employment Status as a Kin Property**

We calculate measures of the kin who would be affected by unemployment of Focal and of the unemployed kin who might affect Focal. The total number of kin whose lives would be affected by unemployment of Focal is the TLA measure:
\[ \text{TLA}(x, t) = \sum_{\text{types}} \mathbf{1}_{\omega}^T k(x, t), \] (9)
where $\mathbf{1}_\omega$ is a vector of 1s of length $\omega$. Multiplication by $\mathbf{1}_\omega^T$ adds all the ages of kin, and the summation is over all the types of kin considered in the kinship network.

In the other direction, the unemployed kin surrounding Focal are given by the TLU measure:

$$\text{TLU}(x, t) = \sum_{\text{types}} \Psi(t)^T \mathbf{k}(x, t). \quad (10)$$

Instead of simply summing over all ages of kin as in Eq. (9), now we weight the ages by a vector $\Psi(t)$, which contains the age-specific unemployment-to-population ratio (UPR) at time $t$. The summation is over all the types of kin considered in the kinship network.

**Measures of Employment Status**

We measure the unemployment status of White and Black subpopulations using the following definitions. The unemployment rate (UR) for a specific age-group in a given year is defined as

$$\text{UR}(x, t) = \frac{\text{Unemployed at age } x \text{ and time } t}{\text{Total civilian labor force at age } x \text{ and time } t} \times 100, \quad (11)$$

where the unemployed term is defined as adults aged 16 or older who (1) have been available to work and have actively looked for work over the past four weeks or (2) were temporarily laid off and waiting to be called back to a specific job. The civilian labor force includes the unemployed and employed populations aged 16 or older.

The age-specific labor force participation rate (LFPR) is specified as

$$\text{LFPR}(x, t) = \frac{\text{Total civilian labor force at age } x \text{ and time } t}{\text{Total population size at age } x \text{ and time } t} \times 100. \quad (12)$$

The LFPR gives the size of the labor force as a percentage of the civilian noninstitutional population. This measure is often converted to the percentage of the civilian population that is working or actively looking for work.

Finally, we define the unemployment-to-population ratio for age-group $x$ at time $t$ as the ratio of unemployed individuals to the civilian noninstitutional population:

$$\text{UPR}(x, t) = \text{LFPR}(x, t) \times \text{UR}(x, t). \quad (13)$$

This measure is equal to 1 minus the employment-to-population ratio, a widely used measure that indicates the proportion of the population that is currently working. The U.S. Bureau of Labor Statistics publishes monthly national employment reports with all the statistics noted in Eqs. (11)–(13).

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5 The number of unemployed kin within a specified age range (e.g., unemployed kin at pre-retirement or post-retirement ages) is given by restricting $\Psi$ to those ages.
Data

Despite studies of unemployment in family and friend networks (e.g., Gough and Killewald 2011; Hällsten et al. 2017; Moen 1979, 1980, 1983), fewer empirical studies have examined the influence of kinship composition or characteristics on individuals’ employment outcomes. This gap in the literature is largely the result of a lack of adequate data: major multigenerational social surveys, such as the PSID, do not include sufficient information on kin ties beyond the targeted household. Some research has combined observational data with microsimulation to infer a wider set of kin relations and their socioeconomic and demographic characteristics (Chung and Hepburn 2018; Murphy 2010; Verdery et al. 2020). These analyses are likely subject to the limitations inherent in using simulated data in general (Billari and Prskawetz 2012). For example, such analyses rely on assumptions on the initial data input and population renewal rules that cannot be validated by empirical data. Microsimulation can sometimes generate biased higher order statistical estimates, which depend heavily on assumptions regarding population size and agent behaviors. Based on formal demographic methods, our analyses avoid modeling micro-level individual behaviors of births, deaths, mating, and reproduction and require only aggregate-level fertility and mortality rates. These estimates complement similar analyses with different research purposes that adopt the simulation approach (e.g., Verdery and Margolis 2017). Alburez-Gutierrez et al. (2020) also demonstrated the usefulness of combining data estimation from both methods in the case of generational overlap projections.

Vital Statistics, 1910–2020

We draw on period estimates of age-specific survival rates (i.e., \( l_x \) in life tables) by race from vital statistics published by the U.S. Census Bureau. These data sources include the United States Life Tables for 1900–1902, 1901–1910, 1909–1911, 1919–1921, 1920–1929, and 1929–1931 (U.S. Bureau of the Census 1936); U.S. Life Tables and Actuarial Tables, 1939–1941 (Greville 1947); Vital Statistics of the United States, 1946–1959; and National Vital Statistics Reports, 1960–2017. For years for which only abridged life tables are available, we use linear interpolation to impute \( l_x \). The age range in the life tables varies by year. Because vital statistics published before 1996 include mortality only between ages 0 and 85, our kinship estimates focus on the same age range.

We obtain period estimates of age-specific fertility rates for both White and Black populations from several sources. Heuser’s (1976) fertility tables include corrections for undercounts in the census estimates and provide period fertility rates by calendar year and age (Lexis squares, age in completed years) for ages 12–55 from 1917 to 1980. For 1910–1916, we assume that the age-specific fertility rates are the same as

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6 For example, in 1997, the Vital Statistics Reports began to publish life tables that extend coverage to age 100 years and older (see Anderson 1999).
for 1917. For more recent years, we use the age-specific fertility rates published in the National Vital Statistics Reports for 1981–2018. Given that fertility rates for 2019 and 2020 have not yet been published, we assume they are the same as in 2018. We use only female data for both mortality and fertility estimates. These data sources are summarized in Table A1 in the online appendix.

**Current Population Survey**

The Current Population Survey (CPS) is a monthly household survey conducted by the Census Bureau for the Bureau of Labor Statistics. The sample of more than 130,000 individuals is representative of the civilian U.S. population aged 15 or older; it excludes individuals in the Armed Forces, prisons, long-term care hospitals, and nursing homes. The survey asks questions about labor force participation, employment status, unemployment, persons not in the labor force, work hours, earnings, and other demographic and labor force characteristics. The CPS typically interviews one person (the reference person) who owns or rents the housing unit, asking questions about the employment status of all eligible members of the household. If the reference person does not know the other household members’ employment status, then other individuals in the household are interviewed directly.

Our analyses draw on CPS data on unemployment rates by age and race from January 2000 to April 2020 to examine changing unemployment patterns. We also use April 2020 microdata to estimate racial gaps in the percentage of children of different ages living with unemployed parents. The April data were collected during April 12–18, 2020, when the number of Americans filing for unemployment surged to a record high since the Great Depression.

**Survey Data on Unemployment During COVID-19**

We supplement our analysis with a nationally representative web panel survey of 2,523 U.S. adults aged 18 years or older. In May and August 2020, we added a question about kinship to an online longitudinal survey conducted through Ipsos KnowledgePanel, a probability-based web panel representative of U.S. adults based on the U.S. Postal Service’s Delivery Sequence File (Qian et al. 2021). The original survey was designed to understand the impact of COVID-19 on different aspects of American life, such as attitudes toward COVID-19, labor force experience before and during the pandemic, recent work and economic changes, and opinions related

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8 We also experimented with the Heuser period fertility table for 1917–1932, assuming rates for 1910–1916 are the same as in 1917. The results are similar to those presented in Figures 1 and 2.
9 Fertility and mortality rates in 2020 may be different from those in 2018 because of the pandemic. These changes in demographic rates, however, are unlikely to affect the kinship structures greatly because most kin were born before 2020.
10 We do not divide unemployment rates by gender because small sample sizes might lead to bias in CPS unemployment estimates by age, gender, and race.
11 The public-use CPS microdata files can be downloaded from https://www.census.gov/programs-surveys/cps/data/datasets.html.
to social issues. After we exclude 105 observations (4%) for missing data, our analytic sample consists of 2,418 respondents. We measured unemployment with two questions. In both Waves 1 and 2, respondents were asked about their employment status during the previous week: working full-time; working part-time; with a job but not working because of temporary illness, vacation, or strike; unemployed, laid off, looking for work; retired; in school; keeping house/homemaker; and other. In Wave 2, respondents were asked to report the number of their relatives (including parents, grandparents, great-grandparents, children, grandchildren, great-grandchildren, siblings, cousins, aunt/uncles, and nieces/nephews) who were unemployed in April 2020. For this item, reported values above six are top-coded at six. The top-coding may affect the accuracy of the kin estimates, but we assume that the effect is small because the proportion in the top category is relatively low (6.25%).

Results

Racial Differences in Unemployment Rates

We begin with results from the conventional unemployment rate measure defined in Eq. (11). The upper panel in Figure 1 plots the unemployment rate for the Black and White working populations aged 16–85 from January 2000 to May 2020. Although we focus on unemployment during the pandemic-induced economic crisis, this figure helps situate the recent estimates in a broader historical context. These aggregated statistics are CPS estimates reported by the U.S. Bureau of Labor Statistics. Recessions over this period are highlighted by gray shading. For Black adults, the unemployment rate over the past 20 years varied between 5.1% and 17.3%, with one peak in 2010 following the economic recession and another peak in April and May 2020. Before the COVID-19 crisis, the unemployment rate for Black workers was at a 10-year low, having dropped from approximately 16% in the early 2010s to 6.5% in early 2020. The White labor force experienced a similar but less dramatic decline in unemployment rates during the same period. The racial difference in unemployment rate decreased from 7.7% (17.3% for Blacks and 9.6% for Whites) in January 2010 to 2.9% (7.0% for Blacks and 4.1% for Whites) in March 2020. Although the unemployment rate surged for both races in April 2020, the racial difference in unemployment did not change much (16.4% for Blacks and 13.8% for Whites).

We also calculate the Black-to-White ratio of unemployment rates, another widely used measure of racial inequality (Couch and Fairlie 2010; Fairlie and Sundstrom 1997; Smith et al. 1974; Welch 1990). As shown in the lower panel of Figure 1, the ratio remained largely stable from January 2000 to March 2020, fluctuating between 1.75 and 2.63. In April 2020, the ratio dropped to 1.19 because of the sharp rise in unemployment among both Black and White Americans. However, during the recovery period in May 2020, employment opportunities increased more rapidly among White adults than among Black adults, and the Black-to-White ratio increased to 1.4. Overall, the conventional measures of unemployment suggest a declining—or at least largely stable—racial gap in unemployment rates in recent years, especially during the pandemic-induced economic crisis.
Racial Differences in Kinship Structure

Next, we show results from the two new kinship-based unemployment measures described in Eqs. (9) and (10) and estimated from time-varying age-specific fertility and mortality rates. These measures are functions of the number of a specified type of kin $k(x, t)$ estimated from time-varying survival rates $U_t$ and fertility rates $F_t$ using vital statistics for 1910–2020. Figure 2 provides an estimate of TLA based on the number of various types of living kin by race. Black Americans have more children, grandchildren, great-grandchildren, siblings, nieces/nephews, and cousins at almost all ages than do Whites, owing to their higher level of fertility. However, they are less likely to have living parents because of their higher mortality rate than that of Whites. By contrast, young Black people aged 0–40 are more likely to have living great-grandparents because of racial differences in the age of childbearing. Great-grandparents of Black Americans are typically younger than those of Whites and thus are more likely to be observed in the population. The plots show little racial
difference in the number of living grandparents and uncles/aunts. Figure A1 in the online appendix further shows the age distributions of different types of kin of a focal individual of age 40. We chose this age because this group is known as the “sandwich generation,” many of whom care for aging parents and young children simultaneously in addition to suffering more severe negative consequences than other age-groups when unemployed. The figure shows that Black adults at age 40 are more likely to have children, grandchildren, and great-grandchildren than Whites are. They
also tend to have younger parents, grandparents, great-grandparents, and uncles/aunts than Whites. The shapes and peaks of the age distributions of siblings, nieces/nephews, and cousins are similar for White and Black individuals, but the levels are higher for Blacks.

Table 1 presents results that combine demographic estimates for all types of kin and average across ages 16–85. The first and second columns of the table show that 16.2 of 100 Black workers in the labor force were unemployed in April 2020, and each Black individual, regardless of their own employment status, had an average of 22.7 kin on average whose lives may have been affected by a job loss. By contrast, despite the high unemployment rate among Whites (12.9%) during the same period, the ripple effect of job loss on kin appears less profound. An average White individual at that time had a kinship size of 20. Therefore, each unemployment incident touched three fewer lives connected by kinship ties among White workers than among Black workers.

### Racial Differences in the Numbers of Unemployed Kin

Figure 3 shows results for the Black–White gap in the number of unemployed kin of all types, by Focal’s age. First, the figure shows an increasing trend in the TLU (as defined in Eq. (10)) with age for both White and Black individuals. This finding suggests that, on average, older adults had more unemployed kin than younger adults. This pattern contrasts with the common finding that young workers are more likely to become unemployed: for example, in April 2020, the unemployment rate was 32.1% for individuals aged 16–19 and 13.6% for those aged 55 or older (BLS 2020a). Because U.S. young adults in their 20s receive more transfers of money and time from kin than adults of other ages, even the very old, intergenerational support is asymmetric (Schoeni 1997). Therefore, the older generation was hit harder by the

<table>
<thead>
<tr>
<th>Unemployment Rate</th>
<th>Total Lives Affected</th>
<th>Total Lives Unemployed</th>
<th>First-Degree Kin</th>
<th>Second-Degree Kin</th>
<th>Third-Degree Kin</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Adults</td>
<td>12.86</td>
<td>19.59</td>
<td>1.25</td>
<td>0.18</td>
<td>0.23</td>
</tr>
<tr>
<td>Black Adults</td>
<td>16.23</td>
<td>22.70</td>
<td>1.68</td>
<td>0.23</td>
<td>0.32</td>
</tr>
</tbody>
</table>

Notes: Total lives affected provides an estimate of the number of individuals whose lives would be affected by an unemployed Focal. Total lives unemployed provides an estimate of the total number of unemployed kin. The numbers include both male and female kin estimates using female data but assuming identical male and female mortality and fertility rates. We assume an equal number of female and male kin. First-degree kin are children and parents; second-degree kin are grandchildren, grandparents, and siblings; and third-degree kin are great-grandchildren, great-grandparents, aunts, uncles, nieces, and nephews.

coronavirus-induced economic crisis because they had more unemployed kin and were more burdened by younger kin.

Second, the figure shows a widening racial gap by age, indicating that the interplay between race and age exacerbated racial inequality. The economic downturn following the coronavirus outbreak more negatively affected Blacks’ attachment to the labor market compared with Whites’ attachment, but the consequences were shared among family members with kinship ties. Black adults aged 60 or more were particularly vulnerable: they had a larger kinship network than their younger and White counterparts and were likely to have more kin who endured economic loss and thus potentially needed greater intrafamily financial assistance. Official unemployment statistics may have disguised the pandemic’s greater economic toll on Black older adults because they overlook kinship factors.\(^\text{12}\)

\(^{12}\) In addition to examining the level of unemployed kin (as in Figure 3), we can estimate the prevalence of unemployed kin, as shown in Figure A2 (online appendix). The results suggest that individuals aged 50–60 have the highest proportion unemployed in their kinship network.
Furthermore, the influence of unemployed kin on individuals’ economic and emotional well-being may depend on degrees of relatedness. We differentiate between first-degree (children and parents), second-degree (grandchildren, grandparents, and siblings), and third-degree kin (great-grandchildren, great-grandparents, aunts/uncles, and nieces/nephews) and show the number of unemployed kin for each set of kin. The findings, displayed in Figure 4, suggest that the relationship between the number of unemployed kin and age varies by degree of relatedness. Individuals aged 45–55 had the most unemployed first-degree kin but had fewer unemployed second-degree kin than individuals of other ages. Individuals aged 60–75 (the baby boomer cohort) had the most third-degree unemployed kin, partly because of their larger kin groups, which resulted from high fertility. Table 1 shows the overall estimates for all age-groups by degrees of relatedness (columns 4–6). A racial gap in the number of unemployed kin is evident in all three levels of relatedness.

Racial Gaps in Unemployed Kin Among Children Aged 0–15

We extend this analysis to include all kinds of kin and provide estimates by age and race. As shown in Figure 5, the number of unemployed kin increased slightly with age for both White and Black children aged 0–15. In contrast to the widening racial
gap by age in the number of unemployed kin for adults shown in Figure 4, no significant pattern of a racial gap by age is evident for children. Compared with White children, Black children had an average of 0.2 more extended family members who were unemployed in April. Children of all ages were equally vulnerable to the potential economic shocks and psychological distress caused by the job loss of their extended family members. Detailed estimates by type of kin are shown in Figure A4.

We supplement the demographic kinship analysis with CPS data from April 2020 to take a closer look at the proportion of children with unemployed parents. Table 2 shows that a higher percentage of Black children (17.0%) than White children (13.6%) have at least one unemployed parent. However, the difference in the percentage of White and Black children with unemployed mothers is only 2.2% (= 14.6% – 12.4%). By contrast, Black children are much more likely to have unemployed fathers than White children (13.4% vs. 7.6%). Black children are almost equally likely to have unemployed fathers and mothers, whereas White children are more likely to have unemployed mothers than fathers. Because of the sampling design of CPS, we can estimate unemployment for

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Table 2 Survey-estimated percentage of children aged 0–15 with unemployed parents

<table>
<thead>
<tr>
<th></th>
<th>Either Parent Unemployed (%)</th>
<th>Father Unemployed (%)</th>
<th>Mother Unemployed (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Children</td>
<td>13.59</td>
<td>7.55</td>
<td>12.36</td>
</tr>
<tr>
<td>Black Children</td>
<td>16.99</td>
<td>13.38</td>
<td>14.61</td>
</tr>
</tbody>
</table>

Note: The sample is restricted to children living in the same household as their parents because of the CPS sampling design.


Table 3 Survey estimates of unemployed adults aged 16–85 and unemployed kin

<table>
<thead>
<tr>
<th></th>
<th>Unemployment Rate</th>
<th>% With Unemployed Kin</th>
<th>Number of Unemployed Kin</th>
<th>Correlation in Unemployment Status Between Focal and Kin</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Adults</td>
<td>13.54</td>
<td>46.36</td>
<td>1.16</td>
<td>.10</td>
<td>1,369</td>
</tr>
<tr>
<td>Black Adults</td>
<td>15.07</td>
<td>49.00</td>
<td>1.32</td>
<td>.07</td>
<td>144</td>
</tr>
</tbody>
</table>

Note: Survey respondents were asked to report their current work arrangement in Wave 1 and the number of unemployed relatives in April 2020 in Wave 2.

Source: COVID-19 Survey Data Waves 1 (May 2020) and 2 (August 2020).

only fathers and mothers who share a household with their children. If noncoresident parents are accounted for, we may observe a greater racial disparity in the percentage of children with unemployed parents driven by missing fathers.

Auxiliary Analysis: Kin Estimates From Survey Data

We supplement formal demographic estimates reported in previous sections with survey estimates from a nationally representative online survey conducted between May and August 2020. The survey asked respondents to self-report their employment status and number of unemployed kin, allowing us to compare empirical estimates and the demographic estimates of TLU shown in Table 1 and obtain new statistics that cannot be derived from the matrix model of kinship. We first compare empirical estimates with demographic estimates based on synthetic cohorts. As shown in Table 3, the unemployment rate for Whites is 13.5%, which is similar to the BLS official statistics reported in Table 1 (12.9%). The Black unemployment rate is slightly lower in the online survey than in the official statistics (15.1% vs. 16.2%), suggesting that the survey may contain a higher proportion of upper-class Black respondents than the national population. We observe a similar pattern when comparing estimates of the number of unemployed kin by race in Tables 1 and 3. On average, Whites have roughly 1.2 unemployed kin, similar to our demographic estimates; Blacks have 1.3 unemployed kin, compared with 1.7 reported in Table 1. The survey data also allow us to examine the correlation between the unemployment status of individuals and
their kin. The unemployment status of kin is a dichotomous variable equal to 1 when an individual has at least one unemployed kin and 0 otherwise. Table 3 shows that the correlation in employment status is small for both racial groups: .10 for White respondents and .07 for Black respondents. One possible explanation for this low correlation is the high prevalence of having one or more kin who lost their jobs in April 2020 among both employed and unemployed U.S. adults.

Discussion

Black Americans are not only more likely to experience job loss but also more vulnerable to job loss in their nuclear and extended family than Whites. Black Americans’ economic vulnerability is present from childhood through adulthood and escalates with age. The interconnected lives of individuals and their kin are an important but not fully visible mechanism that generates racial disparities in economic outcomes. We offer a demographic approach that allows us to estimate concentrated unemployment in kinship groups and show the reverberating effects of job loss through extended family networks.

Researchers and policymakers tend to rely on unemployment rates or the Black-to-White ratio of unemployment to evaluate racial inequality and the consequences of economic recessions. This measure, however, may lead to the biased conclusion that racial inequality has decreased in recent years, especially during the pandemic-induced recession. For example, according to Fairlie et al.’s (2020) estimates, 14.3% of Black workers were newly unemployed in April 2020, only 2.8% higher than the rate for Whites. Figure 1 shows the decline in the Black-to-White ratio of unemployment from greater than 2 during the 2000s to 1.2 in April 2020. This measure concerns only the population at risk—namely, those who are in the labor force—while ignoring the broader population that may be affected by unemployment because of social connections among individuals.

In this article, we focus on exposure to unemployed kin and the number of kin an unemployed person has—demographic factors that the literature has ignored but that are relevant to changing racial gaps in unemployment. Our results do not speak directly to the amount of economic and emotional support that individuals give to or receive from their kin. Indeed, individuals and their families vary widely in their responses to unemployment shocks. It is impossible to quantify the impacts of COVID-19 unemployment spikes on the well-being of Americans and their kin without in-depth data about their gains and losses. However, if more unemployment among kin is associated with more burden and stress, our results suggest that Black Americans, especially those who are 60 years or older, suffered more from the recent unemployment shock than their White counterparts. Bianchi et al. (2021) argued that the COVID-19 unemployment shock will have a long-run effect on mortality and life expectancy. Our analyses offer an additional mechanism that operates not through an individual’s unemployment status but through the kinship network.

13 The estimation of newly unemployed considers only those who lost jobs during the COVID-19 pandemic. It excludes longer term unemployment of more than two months.
Not all unemployed individuals have an equal risk of economic susceptibility. Demographic factors that shape unequal kinship structure between White and Black Americans put the Black population in a more disadvantaged social position. Future work should examine factors that compound racial gaps in unemployed kin, such as age, life course stage, and the spatial concentration of disadvantage. Individuals vary in their resilience to economic cycle fluctuations. The implications of this study go beyond the COVID-induced social crisis. Racial inequality in kinship unemployment is not a new form of inequality, but the lack of empirical data has limited our understanding of linked economic loss through the lives of kin members. Here, we present a formal demographic method to show this type of inequality, but more survey and quasi-experimental data are necessary to investigate and address the causal aspects of this profound social problem and develop social interventions that help alleviate it.

Several limitations of our analyses are worth noting. First, theory and data limitations required that we assume a hypothetical situation in which male and female rates are identical. Male fertility data by race are not reported in National Vital Statistics Reports or before the 1917 fertility table prepared by Heuser (1976). We had to approximate TLA and TLU by assuming identical male and female fertility and mortality rates over time. Further, we cannot provide kinship estimates for racial subgroups other than Black and White because of incomplete mortality and fertility data for minority groups published in official statistics. Alternatively, we can estimate kinship patterns for Asians and Hispanics using time-invariant kinship models with fewer data, but these models rely on stronger assumptions than those illustrated in this article.

It is impossible to predict a priori the consequences of the approximation. Male mortality is typically higher than female mortality, which would reduce male kin numbers relative to female numbers. On the other hand, males typically have higher fertility rates than females, which could increase the numbers of all types of kin. A full two-sex kinship model would be valuable in analyzing the impact of factors, such as employment, that differentially affect males and females.

Second, we do not directly measure the outcomes of individuals who are likely to be affected by their own and their kin’s unemployment. The exact impact of unemployed kin may vary across families and depend on kinship size, age compositions, and the outcome variable of interest. Future research with measures such as physical and mental health outcomes, economic loss, and family stability could provide a better understanding of mechanisms that explain how the effects of unemployment reverberate through extended families. Finally, our unemployment rates drawn from the CPS refer to the civilian noninstitutional population. Given the racial disparity in incarceration and the collateral consequences of incarceration on inmates’ families, who are often considered as hidden or invisible victims (Braman 2007; Hagan and Dinovitzer 1999), Black Americans are more likely to suffer greater consequences of the pandemic than Whites. Data limitations prevent us from obtaining kin estimates that account for the institutional population.

**Conclusion**

Long-standing racial inequality endangers Black Americans’ employment opportunities and outcomes. The racial gaps in unemployment rates have declined in recent
years, but Black Americans’ life circumstances do not follow the same trend. This study reveals that demography helps explain Black Americans’ stagnating or even worsening economic well-being. The extended family network provides a safety net for individuals if they fall on hard times. The pandemic has caused not only a public health crisis but also a social crisis, prompting job interruptions and losses, limiting social interactions, and disrupting the economic fabric of the lives of individuals and their families. Black Americans and their families have been hit particularly hard during the pandemic-induced economic crisis.

The present study’s findings highlight substantial racial gaps in kinship size and the number of unemployed family members in kinship networks. National stimulus programs, including additional unemployment insurance benefits, would boost business and reduce economic stress for laid-off workers and their families. However, these reductions—even if implemented immediately—would not dramatically narrow racial disparities in exposure to unemployment. Black Americans, especially those in the early baby boomer cohort, are almost twice as vulnerable as White Americans to experiencing unemployment for themselves or their families. We thus call for policies and programs on unemployment insurance for high-risk populations that consider workers’ characteristics as well as the composition of their kinship networks.

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References


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