

The Impact of Economic Policy Uncertainty in the United States on Unemployment of Black and White Americans: Pre-pandemic Evidence

DEJAN ROMIH, MOJCA RAMŠAK & ALENKA KAVKLER

Abstract This paper examines the impact of economic policy uncertainty in the United States on unemployment of black and white Americans before the COVID-19 pandemic/recession. Our evidence shows that a positive economic policy uncertainty shock leads to an increase in the unemployment rate for members of both racial groups, which is in line with our expectations. However, our evidence also shows that economic political uncertainty in the United States is affecting the unemployment rate of black Americans faster and more strongly.

Ključne besede: • black American • economic policy uncertainty • unemployment • United States • white American

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1 Introduction

Economic policy uncertainty has become a hot topic in recent years, following the Great Recession. Many politicians and policymakers believe that economic policy uncertainty contributed to a slower recovery of the labour market after the Great Recession (Baker et al., 2016). However, it is unclear whether this is true or not. There is a growing literature on the impact of economic policy uncertainty on the labour market (see, e.g., Baker et al., 2016; Caggiano et al., 2017, 2019).

This paper examines the impact of economic policy uncertainty in the United States on unemployment of black and white Americans before the COVID-19 pandemic/recession. As far as we know, this is the first study on this subject, so its purpose is to fill the gap in the literature. This study asks whether and how economic policy uncertainty in the United States affects unemployment of members of both racial groups. In this way, it contributes to the literature on unemployment of black and white Americans and on the impact of economic policy uncertainty in the United States on the labour market. As the labour market in the United States continues to improve, unemployment of black Americans, who are believed to be the last hired and the first fired (Couch & Fairlie, 2010), remains a big issue for politicians and policymakers in the United States.

The rest of this paper is divided into five sections. Section 2 reviews the literature on the unemployment of black and white Americans and on the impact of economic policy uncertainty in the United States on the labour market. Section 3 gives the methods we use in our research. Section 4 gives the results. Section 5 discusses them. Section 6 concludes this paper.

2 Literature review

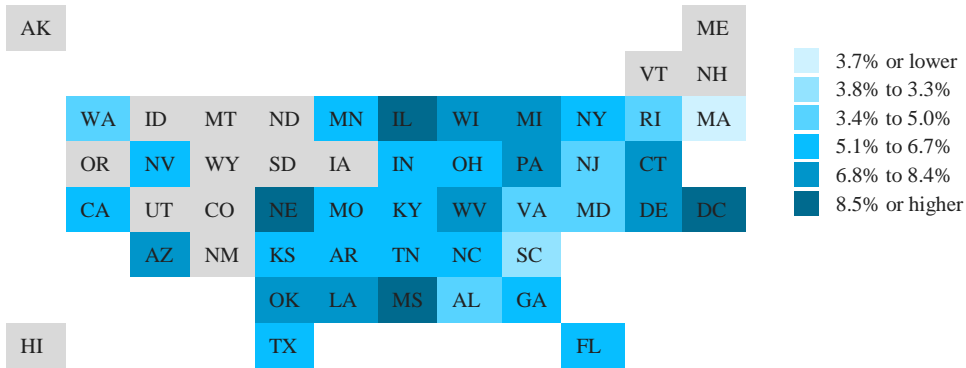
2.1 The unemployment of black and white Americans

Southern landowners discovered early in colonial America that using African slaves to work their land might maximize their profits, and a set of laws was enacted to rationalize perpetual race-based enslavement. These rules became tougher over time, and black American labourers were increasingly dehumanized after each real or imaginary slave insurrection. Slave revolts terrified the political establishment, not only because of the physical danger they posed to a minority white elite (white Americans), but also because they revealed the violence required to keep slavery alive. It took nearly a century of agitation, resistance, political organizing, and the nation's worst conflict to put an end to that "most peculiar institution". However, the Confederacy's defeat did not end the influence of southern landowners or their racial superiority ideology. When the Civil War ended, Confederate officers returned to their estates and erected "black codes" restricting black people's ability to own property, teach, preach, or travel. In other words, the new rules revoked freshly liberated slaves' freedom and punished

anyone who refused to comply. Thousands of liberated individuals were murdered in the initial years after liberation for attempting to flee plantations or refusing to labour on the terms imposed. The treatment of black American employees in the South is the beginning of the story of race and labour in America. The region's cultural isolation from the rest of the country, but continued political and economic dominance, remains to this day. When black Americans travelled north in the twentieth century, they found more personal freedom – but also continued discrimination and unequal access to economic possibilities – as a result of two world wars and the Great Depression. Business interests used race and ethnic divides to weaken labour solidarity in the decades between the two wars. Some unions supported integration, while others opposed it. Conservative politicians used racial stereotypes and white fear and anxieties to divide working people even after civil rights laws made racial discrimination illegal in the 1960s. They are still doing so today (AFL-CIO, 2021).

The United States saw the widest gap in unemployment rates for black and white Americans in five years in June 2020, underscoring an uneven nascent recovery from historic job losses triggered by the COVID-19 pandemic. Jobless rates for both groups fell in June, but the rate for white Americans came down at a much faster rate. The unemployment rate for white Americans fell from 12.4% to 10.1%, while the unemployment rate of black Americans fell from 16.8% to 15.4%, according to data released by the Labor Department. At 5.3 percentage points, the gap is now the widest since May 2015 and exposes an important economic component of racial inequality at a pivotal moment in US race relations. The country has been rocked by nationwide protests over police brutality against black Americans in 2020. The COVID-19 pandemic brought an abrupt end to the record-long US economic expansion just as it was creating better job opportunities for black American workers and other minorities. Job losses fell hardest on women and workers of colour. As the labour market recovers, black American workers are seemingly among the last to benefit, repeating the pattern typically seen following a recession. The unemployment rate for black American men rose in June 2020 to 16.3%, the highest level since the fall of 2011. Black American workers now have the highest unemployment rate compared to other ethnic or racial groups. The unemployment rate for Hispanics fell from 17.6% in May 2020 to 14.5% in June 2020. The unemployment rate for Asian Americans fell from 15% to 13.8% (Marte, 2020).

Figure 1 shows the average unemployment rate for black Americans in 2019 by state.

Figure 1: The average unemployment rate for black Americans by state, 2019

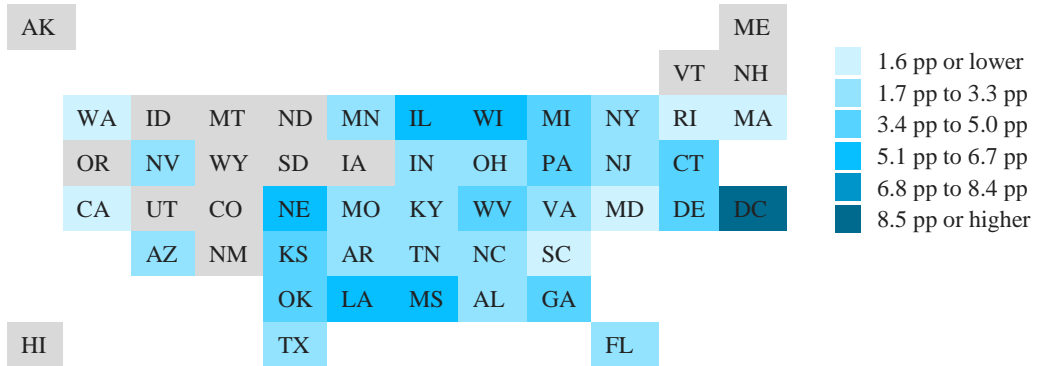
Notes: AL = Alabama, AK = Alaska, AR = Arkansas, AZ = Arizona, CA = California, CO = Colorado, CT = Connecticut, DC = District of Columbia, DE = Delaware, FL = Florida, GA = Georgia, HI = Hawaii, IA = Iowa, ID = Idaho, IL = Illinois, IN = Indiana, KS = Kansas, KY = Kentucky, LA = Louisiana, MA = Massachusetts, MD = Maryland, ME = Maine, MI = Michigan, MN = Minnesota, MO = Missouri, MS = Mississippi, MT = Montana, NC = North Carolina, ND = North Dakota, NE = Nebraska, NH = New Hampshire, NJ = New Jersey, NM = New Mexico, NV = Nevada, NY = New York, OH = Ohio, OK = Oklahoma, OR = Oregon, PA = Pennsylvania, RI = Rhode Island, SC = South Carolina, SD = South Dakota, TN = Tennessee, TX = Texas, UT = Utah, VA = Virginia, VT = Vermont, WA = Washington, WI = Wisconsin, WV = West Virginia, WY = Wyoming. States for which there is no data are marked in grey.

Source: U.S. Bureau of Labor Statistics (2020).

In 2019, the average unemployment rate for black Americans was the highest in District of Columbia (12.1%) and lowest in Massachusetts (3.7%). In 2019, the average unemployment rate for black Americans was 8.5% or higher in four states, namely District of Columbia, Illinois, Mississippi and Nebraska.

Figure 2 shows the difference between the average unemployment rate for black Americans and the average unemployment rate for white Americans in 2019 by state.

Figure 2: The difference between the average unemployment rate for black Americans and the average unemployment rate for white Americans by state, 2019



Notes: See Figure 1.
 Source: U.S. Bureau of Labor Statistics (2020).

In 2019, the difference between the average unemployment rate for black Americans and the average unemployment rate for white Americans was the largest in District of Columbia (10.2 pp) and the smallest in Washington (-0.1 pp).

In every recession there are the same disparities. After the global financial crisis, for example, 23.8% of jobless black American workers received unemployment vs. 33.2% for white American workers. In the 1950s, an average of 50% of jobless people were able to regularly access benefits; by the end of 2019, that average had fallen to 28% of workers. The states that have made the deepest cuts to their unemployment programs are mostly in the South and have a higher share of black American residents. In states such as Florida and North Carolina, fewer than 12% of jobless individuals received benefits in 2019. The inequity in unemployment benefits is all the more damaging because black American workers have been more likely to be unemployed in both the current downturn and in past recessions. Even when the economy is healthy, black unemployment is dramatically higher – often double – that of white unemployment. The gap cannot be explained by gender, age or education level. Even when black American workers do obtain benefits, they often receive smaller payments than white American workers, since the benefits are determined by salary and black American workers earn less at every education level. When we look back in the history, we see that the origins of some of these barriers were driven by racism and xenophobia. The Social Security Act established unemployment insurance, in 1935, as a joint federal-state system. It had a narrow definition of who deserved benefits: full-time breadwinners who had been momentarily laid off but would return to work as soon as business picked up. This

definition deliberately excluded agricultural and domestic workers, jobs held predominantly by black Americans, from its purview (Kofman & Fresques, 2020).

Historically, the labour force participation rate (the proportion of people working or looking for work as a percentage of the civilian noninstitutional population) for black men has been lower than the rate for all men. In 2019, the rate for black men was 64.8%, which was 4.4 percentage points lower than the rate of 69.2% for men overall. Black women have typically had higher labour force participation rates than all women, though the difference is not as great. In 2019, the labour force participation rate for black women was 60.5%, while the rate for all women was 57.4%. The labour force participation rate for all men has generally been on a downward trend since 1972. In contrast, the participation rate for all women increased dramatically from the 1970s through the 1980s, before slowing in the 1990s. After reaching a peak in 1999, labour force participation among women began a gradual decline, before levelling off in recent years (Brundage, 2020: 4).

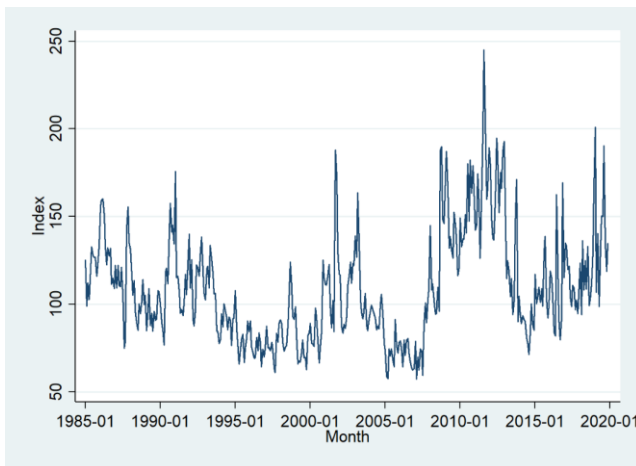
In 2019, foreign-born non-Hispanic black Americans were more likely to participate in the labour force than were all foreign born (70.8% versus 66.0%). By contrast, native-born black Americans were about as likely as all native born to participate in the labour force (61.1% and 62.5%, respectively). The foreign born are people who reside in the United States but who were not US citizens at birth. Specifically, they were born outside the United States (or one of its outlying areas such as Puerto Rico or Guam), and neither parent was a US citizen. The foreign born include legally admitted immigrants, refugees, temporary residents such as students and temporary workers, and undocumented immigrants. The native born are people born in the United States or one of its outlying areas such as Puerto Rico or Guam or, if born abroad, had at least one parent who was a US citizen (Brundage, 2020: 5). Greater educational attainment is generally associated with a higher likelihood of labour force participation. In 2019, 77.9% of black Americans with an advanced degree (master's, professional, or doctoral degree) and 77.4% of black Americans with a bachelor's degree participated in the labour force, compared with 58.9% of black Americans with a high school diploma and 37.3% of black Americans with less than a high school diploma (Brundage, 2020: 6). In 2019, 28% of employed black Americans worked in the education and health services industry, higher than the national average for that industry (23%). Another one-fifth of employed black Americans worked in retail trade (10%) and in leisure and hospitality (10%). Employed black Americans were less likely to work in professional and business services, manufacturing, and construction than were all employed people (Brundage, 2020: 8). About one-fourth of black American wage and salary workers usually worked a non-daytime schedule in 2017–2018, compared with 16% of all workers. 9% of black American workers usually worked evenings, 5% worked nights, and 4% worked an irregular schedule. The remaining black American workers had a rotating shift, split shift, or some other schedule (Brundage, 2020: 11).

2.2 The impact of economic policy uncertainty in the United States on the labour market

Baker et al. (2016) examined the impact of economic policy uncertainty on employment in the United States and found that a positive economic policy uncertainty shock leads to a decrease in the employment rate, which is consistent with the growing pre-pandemic evidence on this subject. Caggiano et al. (2017) examined the impact of economic policy uncertainty on unemployment in the United States and found that a positive economic policy uncertainty shock leads to an increase in the unemployment rate in both good and bad times. Caggiano et al. (2019) examined the impact of economic policy uncertainty in the United States on unemployment in Canada and the United Kingdom and found that a positive economic policy uncertainty shock in the United States leads to an increase in the unemployment rate in Canada and the United Kingdom in both good and bad times.

Figure 3 shows the newspaper-based index of economic policy uncertainty for the United States, developed by Baker et al. (2016), from January 1985 to November 2019.

Figure 3: The newspaper-based index of economic policy uncertainty for the United States from January 1985 to November 2019



Source: Federal Reserve Bank of St. Louis (2021a).

Figure 3 shows that the newspaper-based index of economic policy uncertainty for the United States was the highest in August 2011 (245.1) and the lowest in February 2007 (57.2).

3 Methods

We test two hypotheses. The first one says that economic policy uncertainty in the United States negatively affects unemployment of black Americans, while the second one says that economic policy uncertainty in the United States negatively affects unemployment of white Americans. We use a reduced-form vector autoregressive (VAR) model with the order p , denoted by $\text{VAR}(p)$, which can be written as:

$$y_t = c + A_1 y_{t-1} + A_2 y_{t-2} + \dots + A_p y_{t-p} + e_t, \quad t = 1, \dots, T,$$

where y_t is a $k \times 1$ vector of endogenous variables, c is a $k \times 1$ vector of constants, A_i is a time-invariant $k \times k$ matrix of coefficients and e_t is a $k \times 1$ vector of error terms.

We first examine the impact of economic policy uncertainty in the United States on unemployment of black Americans, and then the impact of economic policy uncertainty in the United States on unemployment of white Americans. In both cases we use a VAR model with five variables. These are the newspaper-based index of economic-policy uncertainty at time t , denoted by epu_t , the logarithm of the S&P 500 at time t , denoted by $s\&p_t$, the effective federal funds rate at time t , denoted by ffr_t , the logarithm of the unemployment rate for black and white Americans at time t , denoted by un_black_t and un_white_t respectively, and the logarithm of the index of industrial production at time t , denoted by ip_t (see Table 1). We use monthly data from January 1985 to November 2019.

Table 1 describes the variables epu_t , $s\&p_t$, ffr_t , un_black_t , un_white_t and ip_t . Variables un_black_t , un_white_t and ip_t are seasonally adjusted.

Table 1: Description of variables

Variable	Description	Source
epu_t	Index of economic policy uncertainty for the United States, monthly, not seasonally adjusted	Federal Reserve Bank of St. Louis
$s\&p_t$	Logarithm of the S&P 500, monthly, not seasonally adjusted	Federal Reserve Bank of St. Louis
ffr_t	Effective federal funds rate, monthly, not seasonally adjusted	Federal Reserve Bank of St. Louis
un_black_t	Logarithm of the unemployment rate for black Americans, monthly, seasonally adjusted	Federal Reserve Bank of St. Louis
un_white_t	Logarithm of the unemployment rate for white Americans, monthly, seasonally adjusted	Federal Reserve Bank of St. Louis
ip_t	Logarithm of the index of industrial production, 2012=100, monthly, seasonally adjusted	Federal Reserve Bank of St. Louis

Based on the information criteria, we selected a VAR model with four lags. In this study, we use two VAR(4) models. The first VAR(4) model, which includes the variable un_black_t , can be written as:

$$\begin{aligned}
 epu_t &= c_1 + a_{1,1}^1 epu_{t-1} + a_{1,2}^1 s\&p_{t-1} + a_{1,3}^1 ffr_{t-1} + a_{1,4}^1 un_black_{t-1} + a_{1,5}^1 ip_{t-1} + \\
 &\dots + a_{1,1}^4 epu_{t-4} + a_{1,2}^4 s\&p_{t-4} + a_{1,3}^4 ffr_{t-4} + a_{1,4}^4 un_black_{t-4} + a_{1,5}^4 ip_{t-4} + e_{1,t} \\
 , \\
 s\&p_t &= c_2 + a_{2,1}^1 epu_{t-1} + a_{2,2}^1 s\&p_{t-1} + a_{2,3}^1 ffr_{t-1} + a_{2,4}^1 un_black_{t-1} + a_{2,5}^1 ip_{t-1} + \\
 &\dots + a_{2,1}^4 epu_{t-4} + a_{2,2}^4 s\&p_{t-4} + a_{2,3}^4 ffr_{t-4} + a_{2,4}^4 un_black_{t-4} + a_{2,5}^4 ip_{t-4} + e_{2,t} \\
 , \\
 ffr_t &= c_3 + a_{3,1}^1 epu_{t-1} + a_{3,2}^1 s\&p_{t-1} + a_{3,3}^1 ffr_{t-1} + a_{3,4}^1 un_black_{t-1} + a_{3,5}^1 ip_{t-1} + \\
 &\dots + a_{3,1}^4 epu_{t-4} + a_{3,2}^4 s\&p_{t-4} + a_{3,3}^4 ffr_{t-4} + a_{3,4}^4 un_black_{t-4} + a_{3,5}^4 ip_{t-4} + e_{3,t} \\
 , \\
 un_black_t &= c_4 + a_{4,1}^1 epu_{t-1} + a_{4,2}^1 s\&p_{t-1} + a_{4,3}^1 ffr_{t-1} + a_{4,4}^1 un_black_{t-1} + \\
 &a_{4,5}^1 ip_{t-1} + \dots + a_{4,1}^4 epu_{t-4} + a_{4,2}^4 s\&p_{t-4} + a_{4,3}^4 ffr_{t-4} + a_{4,4}^4 un_black_{t-4} + \\
 &a_{4,5}^4 ip_{t-4} + e_{4,t} \\
 , \\
 ip_t &= c_5 + a_{5,1}^1 epu_{t-1} + a_{5,2}^1 s\&p_{t-1} + a_{5,3}^1 ffr_{t-1} + a_{5,4}^1 un_black_{t-1} + a_{5,5}^1 ip_{t-1} + \\
 &\dots + a_{5,1}^4 epu_{t-4} + a_{5,2}^4 s\&p_{t-4} + a_{5,3}^4 ffr_{t-4} + a_{5,4}^4 un_black_{t-4} + a_{5,5}^4 ip_{t-4} + e_{5,t} \\
 , t &= 5, \dots, 419.
 \end{aligned}$$

We use the Cholesky decomposition. The order of the variables is the same as in Baker et al. (2016). The difference is that we use the unemployment rate instead of the employment rate.

The second VAR(4) model, which includes the variable un_white_t instead of the variable un_black_t , can be written as:

$$\begin{aligned}
 epu_t &= c_1 + a_{1,1}^1 epu_{t-1} + a_{1,2}^1 s\&p_{t-1} + a_{1,3}^1 ffr_{t-1} + a_{1,4}^1 un_white_{t-1} + a_{1,5}^1 ip_{t-1} + \\
 &\dots + a_{1,1}^4 epu_{t-4} + a_{1,2}^4 s\&p_{t-4} + a_{1,3}^4 ffr_{t-4} + a_{1,4}^4 un_white_{t-4} + a_{1,5}^4 ip_{t-4} + e_{1,t} \\
 , \\
 s\&p_t &= c_2 + a_{2,1}^1 epu_{t-1} + a_{2,2}^1 s\&p_{t-1} + a_{2,3}^1 ffr_{t-1} + a_{2,4}^1 un_white_{t-1} + a_{2,5}^1 ip_{t-1} + \\
 &\dots + a_{2,1}^4 epu_{t-4} + a_{2,2}^4 s\&p_{t-4} + a_{2,3}^4 ffr_{t-4} + a_{2,4}^4 un_white_{t-4} + a_{2,5}^4 ip_{t-4} + e_{2,t} \\
 , \\
 ffr_t &= c_3 + a_{3,1}^1 epu_{t-1} + a_{3,2}^1 s\&p_{t-1} + a_{3,3}^1 ffr_{t-1} + a_{3,4}^1 un_white_{t-1} + a_{3,5}^1 ip_{t-1} + \\
 &\dots + a_{3,1}^4 epu_{t-4} + a_{3,2}^4 s\&p_{t-4} + a_{3,3}^4 ffr_{t-4} + a_{3,4}^4 un_white_{t-4} + a_{3,5}^4 ip_{t-4} + e_{3,t} \\
 , \\
 ,
 \end{aligned}$$

$$un_white_t = c_4 + a_{4,1}^1 epu_{t-1} + a_{4,2}^1 s\&p_{t-1} + a_{4,3}^1 ffr_{t-1} + a_{4,4}^1 un_white_{t-1} + a_{4,5}^1 ip_{t-1} + \dots + a_{4,1}^4 epu_{t-4} + a_{4,2}^4 s\&p_{t-4} + a_{4,3}^4 ffr_{t-4} + a_{4,4}^4 un_white_{t-4} + a_{4,5}^4 ip_{t-4} + e_{4,t}$$

$$ip_t = c_5 + a_{5,1}^1 epu_{t-1} + a_{5,2}^1 s\&p_{t-1} + a_{5,3}^1 ffr_{t-1} + a_{5,4}^1 un_white_{t-1} + a_{5,5}^1 ip_{t-1} + \dots + a_{5,1}^4 epu_{t-4} + a_{5,2}^4 s\&p_{t-4} + a_{5,3}^4 ffr_{t-4} + a_{5,4}^4 un_white_{t-4} + a_{5,5}^4 ip_{t-4} + e_{5,t}, t = 5, \dots, 419.$$

4 Results

Racial discrimination is a big problem for the black American community (Clayton, 2020). Davis (2020) found that black Americans are more pessimistic than white Americans about the state of racial affairs in the United States. Research shows that black American workers are often victims of racial discrimination in the workplace. This is especially true for black American blue-collar workers. Some researchers believe that black American blue-collar workers are among the first to be fired. They also believe that black American blue-collar workers are often in fear for their job. The COVID-19 pandemic/recession has been hard on black American low-wage workers. The recession has been accompanied by a rise in the unemployment rate for black Americans and has had an impact on black American blue-collar neighbourhoods. Our research contributes to the debate over the situation of black Americans in the workforce.

Table 2 shows descriptive statistics for the six variables we use in our research.

Table 2: Descriptive statistics

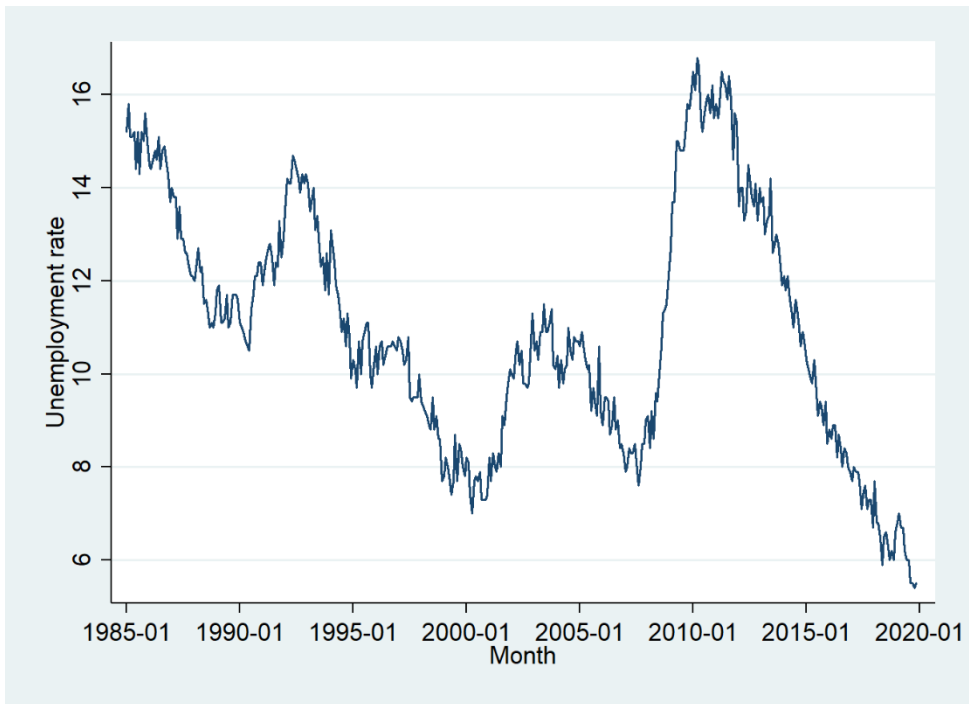
Variable	Number of observations	Mean	Standard deviation	Minimum	Maximum
<i>epu_t</i>	419	109.1111	31.83032	57.20262	245.1267
<i>s&p_t</i>	419	6.784432	.7398415	5.190899	8.05229
<i>ffr_t</i>	419	3.590072	2.78632	.07	9.85
<i>un_black_t</i>	419	2.365985	.2500422	1.686399	2.821379
<i>un_white_t</i>	419	1.61118	.2520748	1.131402	2.219203
<i>ip_t</i>	419	4.441754	.2106613	4.025769	4.705482

Source: See Table 1.

4.1 The impact of economic policy uncertainty in the United States on unemployment of black Americans

Figure 4 shows the unemployment rate for black Americans from January 1985 to November 2019.

Figure 4: Unemployment rate for black Americans from January 1985 to November 2019



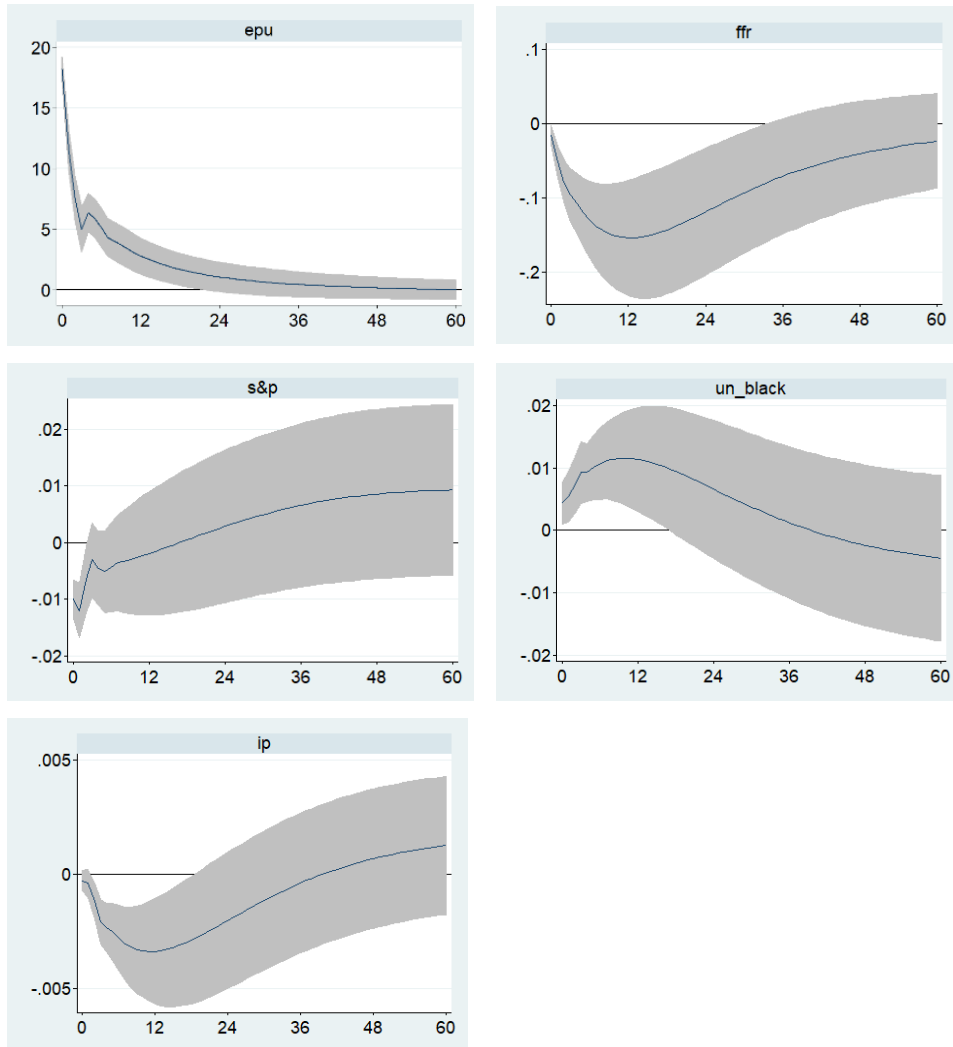
Source: Federal Reserve Bank of St. Louis (2021b).

Figure 4 shows that the monthly unemployment rate for black Americans was the highest in March 2010 (16.8%) and the lowest in October 2019 (5.4%).

Figures 5 and 7 show the orthogonalized impulse response graphs in two cases. In the first case, we examine the impact of economic policy uncertainty in the United States on unemployment of black Americans, while in the second case, we examine the impact of economic policy uncertainty in the United States on unemployment of white Americans.

In both cases, the data refer to the period before the COVID-19 pandemic/recession. Both VARs are stable.

Figure 5: The orthogonalized impulse response graphs in the first case



Note: A 90% confidence level is used.

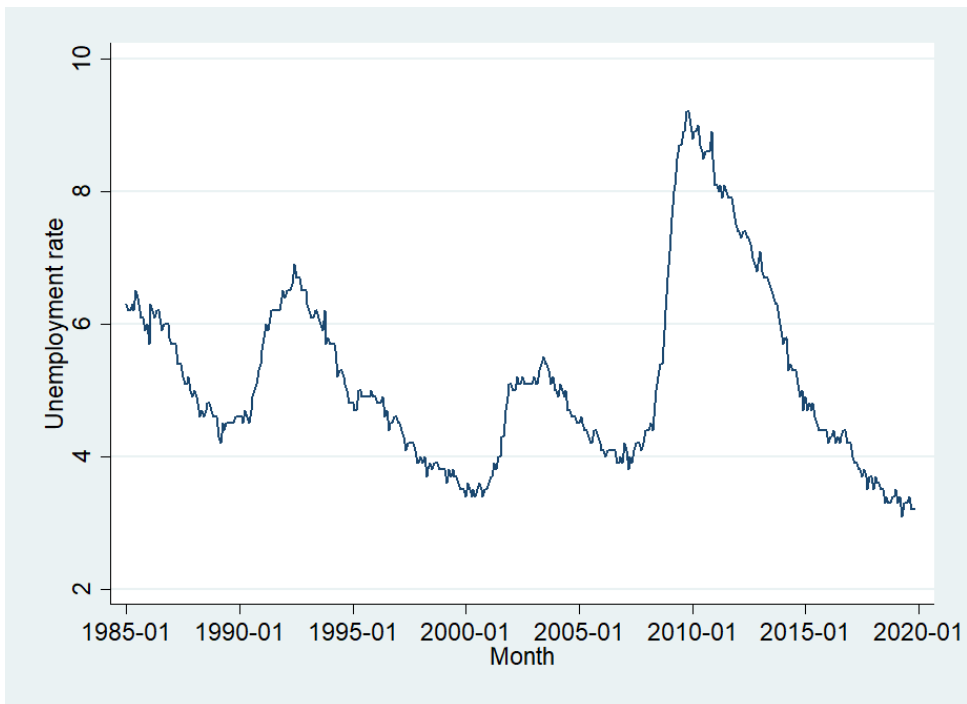
Figure 5 shows that a positive unit (one standard error) economic policy uncertainty shock leads to a decrease in the S&P 500, the effective federal funds rate and industrial

production. As can be seen, the decrease in the S&P500, the effective federal funds rate and industrial production is statistically significant. Figure 5 also shows that a positive unit (one standard error) economic policy uncertainty shock leads to an increase in the unemployment rate for black Americans. As can be seen, the increase in the unemployment rate for black Americans is statistically significant a year and a half after the orthogonalized shock.

4.2 The impact of economic policy uncertainty on unemployment of white Americans

Figure 6 shows the unemployment rate for white Americans from January 1985 to November 2019.

Figure 6: Unemployment rate for white Americans from January 1985 to November 2019

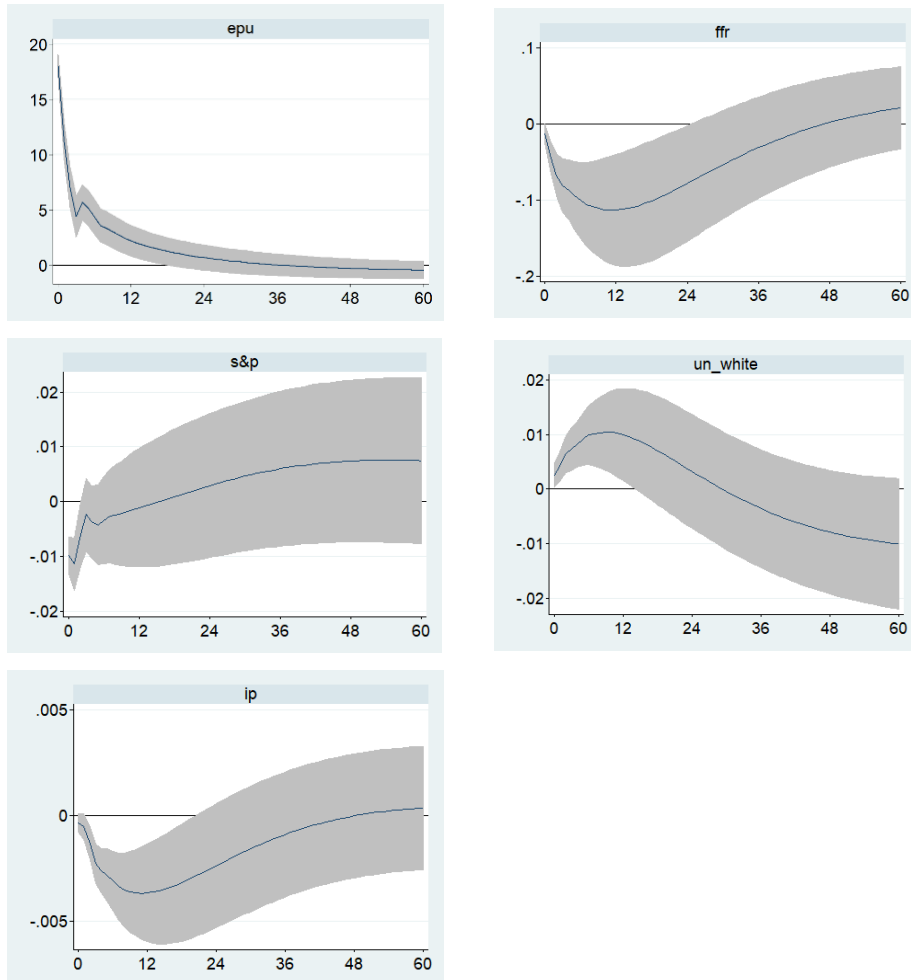


Source: Federal Reserve Bank of St. Louis (2021c).

Figure 6 shows that the unemployment rate for white Americans was the highest in October and November 2009 (9.2%) and the lowest in April 2019 (3.1%).

Figure 7 shows the orthogonalized impulse response graphs in the second case.

Figure 7: The orthogonalized impulse response graphs in the second case



Note: A 90% confidence level is used.

Figure 7 shows that a positive unit (one standard error) economic policy uncertainty shock leads to a decrease in the S&P 500, the effective federal funds rate and industrial

production. As can be seen, the decrease in the S&P500, the effective federal funds rate and industrial production is statistically significant. Figure 7 also shows that a positive unit (one standard error) economic policy uncertainty shock leads to an increase in the unemployment rate for black Americans. As can be seen, the increase in the unemployment rate for black Americans is statistically significant less than a year and a half after the orthogonalized shock. Our evidence shows that the impact of the economic policy uncertainty shock on unemployment rate for black Americans is slightly faster and greater than the impact of the economic policy uncertainty shock on unemployment rate for white Americans, which is in line with our expectations.

4 Discussion

Our findings provide insights into whether and how economic policy uncertainty in the United States affects unemployment of black and white Americans. We found that economic policy uncertainty in the United States adversely affects the labour market for members of both racial groups, however, the impact is slightly greater and faster in the case of unemployment of black Americans. This means that black American workers are slightly less resistant to an economic policy uncertainty shock in the United States.

5 Conclusion

Unemployment of black Americans is a big issue for politicians and policymakers in the United States. The COVID-19 pandemic/recession has sparked a debate on racial discrimination of black American workers in the US labour market. This paper therefore asks, among other things, whether economic policy uncertainty in the United States affects unemployment of black and white Americans differently. Our evidence shows that this is actually the case.

Acknowledgment:

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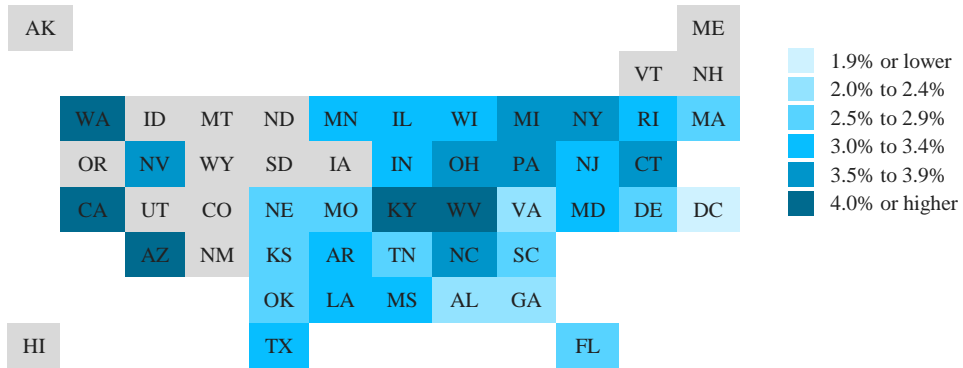
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Appendix

Figure A.1 shows the average unemployment rate for white Americans in 2019 by state.

Figure A.1: The average unemployment rate for white Americans by state, 2019



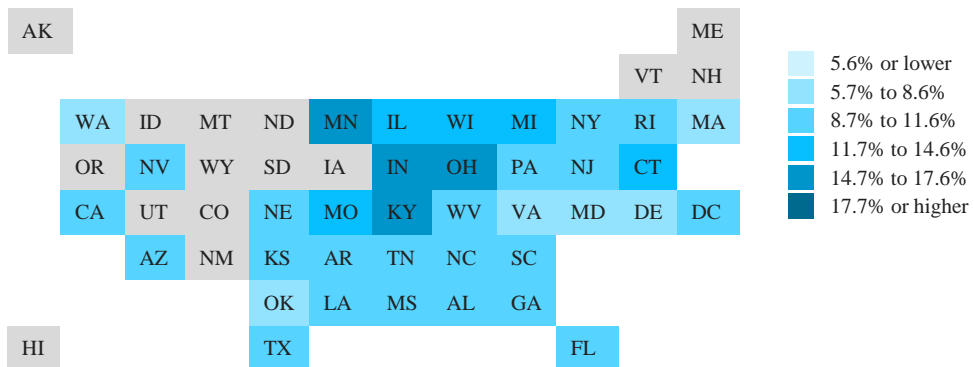
Notes: See Figure 1.
Source: U.S. Bureau of Labor Statistics (2020).

In 2019, the average unemployment rate for white Americans was the highest in Arizona and West Virginia (4.6%) and lowest in District of Columbia (1.9%). In 2019, the average unemployment rate for white Americans was 4.0% or higher in five states, namely Arizona, California, Kentucky, Washington and West Virginia.

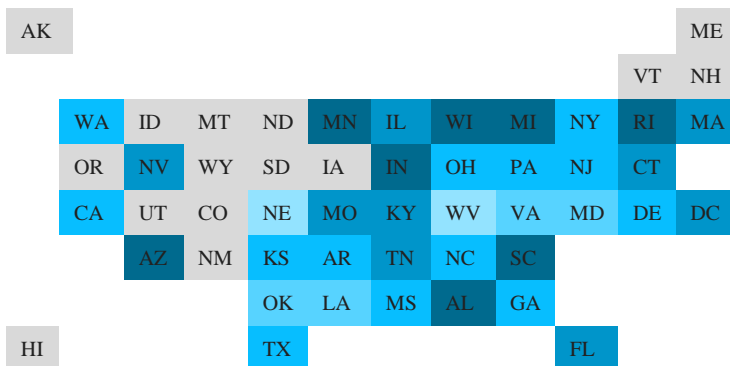
Figure A.2 shows the average unemployment rate for black Americans in 2008 and 2009 by state.

Figure A.2: The average unemployment rate for black Americans by state, 2008 and 2009

2008



2009



Notes: See Figure 1.

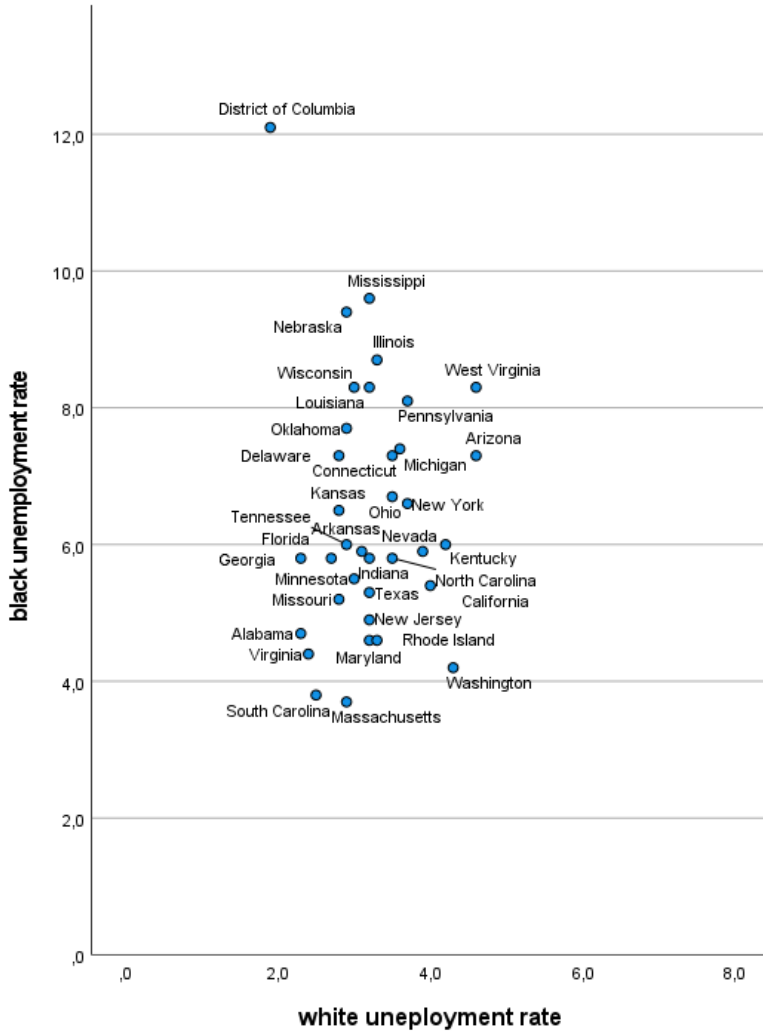
Source: U.S. Bureau of Labor Statistics (2009, 2010).

During the Great Recession in the United States, the average unemployment rate for black Americans rose the most in Wisconsin (11 pp), while it fell the most in Nebraska (-2 pp). In 2009, the average unemployment rate for black Americans was the highest in Wisconsin (23.8%) and lowest in West Virginia (8.9%).

To analyse the grouping of states by black and white unemployment rates, we also used two-step cluster analysis. This procedure determines the appropriate number of groups (clusters) in the first step and divides the observations into clusters in the second step using a non-hierarchical clustering procedure (Hair et al, 2014). Tkaczynski (2017) explains the stages that need to be performed in order to efficiently carry out this clustering technique. The author also discusses several recent segmentation studies that use this method and points out the limitations of this approach.

Statistical analysis was performed using the SPSS statistical package. The Euclidean distance measure was used, in combination with Schwarz's Bayesian Criterion (BIC) as the clustering criterion. The number of clusters was determined automatically, with the maximum number of clusters set at 15. The two-step cluster analysis resulted in a single-cluster solution. As can be seen from the scatter plot of black unemployment versus white unemployment (Figure A.3), there is only one cluster with an outlier, the District of Columbia.

Figure A.3: Scatterplot of black unemployment rate vs. white unemployment rate by states, 2019 annual averages



Source: U.S. Bureau of Labor Statistics (2020).