Labor Policy Considering Stratification: An Alternative Framing for Employment Disparities

Draft prepared for URPE @ ASSA 2020 Conference, January 2-5, 2020

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JEL Codes: J680, O180, R580
Keywords: Stratification economics, labor policy, inequality, federal job guarantee

Abstract

Public policy aimed at addressing labor underutilization could benefit from further engagement with stratification economics. If unemployment is so low, is the U.S. at full employment? Specifically, do all labor force indicators show a recovery from the 2007-2008 recession? Labor policy design and implementation necessarily requires decisions on how we operationalize definitions and measurements of unemployment and underemployment. In this paper we consider proposals for a federal jobs guarantee or public service employment program. A properly designed and implemented federal jobs guarantee has the potential to reform employment policy and address injustices in the economy. Injustices which have led to racial wealth inequality and impeded the social provisioning process. The anemic recovery from the Great Recession further revealed the need for extensive reform. Employment gains and losses are unequally shared or suffered across gender, race-ethnicity, and space. However, a one-size-fits-all approach to the design and implementation of a federal jobs guarantee may only reinforce existing disparities. The often referenced "locally administered" aspects of the program deserve further attention to ensure the program works within regional and local ecological capacity and to address historical injustices. Employment outcomes reflect the social and political settings within which they operate. The stratified nature of employment outcomes are a product of the discrimination, segregation, and political and cultural norms of societies. Ignoring this landscape will result in suboptimal outcomes and insufficient redresses of persistent income and wealth disparities.

In this paper we evaluate measures of unemployment and underemployment through the lens of post-Keynesian economics and stratification economics, and the strong intersection between these two prominent heterodox approaches. A decomposition and demographic analysis of aggregate labor force transition rates and gross flows allows us to better understand stratification in employment outcomes. We build upon recent work using the U.S. Current Population Survey to calculate transition rates and gross flows between various labor force states from 1998 until the present. We extend recent work on alternative indicators of unemployment using labor force transition rates and gross flows to investigate (un)employment through the lens of stratification economics. A just implementation of a federal jobs guarantee will require a critical approach to planning and implementation. Issues of gender, race, class, culture, and space will need to be addressed. Prevailing mainstream economic frameworks are insufficient to govern the task; an interdisciplinary approach is necessary.

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Overview

In this paper we extend recent work on alternative indicators of unemployment using labor force transition rates and gross flows to investigate (un)employment through the lens of stratification economics, which recognizes the role of inter- and intra-group power dynamics and group competition in creating and perpetuating inequitable employment outcomes (Darity, et al., 2017). We build upon recent research in conventional labor economics to estimate transition rates and gross flows between various labor force states for different racial-ethnic groups[3] from 1998 to 2019 using microdata from the U.S. Current Population Survey (CPS) (Cajner, et al., 2017; Couch, et al., 2016, Couch and Fairlie, 2010). While it is widely accepted that broad indicators conventionally used to evaluate the labor market mask important differences across demographic groups (Assessing Differences, 2017) foundational aspects of conventional labor economics goes even further, masking stratification in employment outcomes across and within groups. Our analysis of employment stratification through decomposition of the three labor force categories and an extension of recent research on labor force trends provides a more robust understanding of uneven economic outcomes compared with conventional methods, which is essential to the design of sustainable and equitable full employment policy.

Federal Reserve system economists have had a prominent voice in this line of research; seeing the deeper understanding of labor dynamics that results from assessing disparate outcomes as key to the role of the Fed in setting monetary policy following the mandate of full employment and price stability (Cajner, et al., 2017). We build upon recent research in conventional labor economics incorporating transition rates, gross flows, and stocks to describe disparate employment outcomes in the U.S (Cajner, et al., 2017; Couch, et al., 2016, Couch and Fairlie, 2010). In addition, we situate our research within the post-Keynesian economics literature on the labor market and employment (Lavoie, 2015; Wray, et al, 2018; Mitchell and Muysken, 2008).

The prevalence of involuntary unemployment and underemployment indicates a persistent failure of the private sector of the U.S. economy to generate enough hours of employment for those who want to work, which disproportionately impacts socially disadvantaged groups (Fullwiler, et al., *forthcoming*; Mohr, 2019; Mohr, et al., *forthcoming*; Vandershans, 2014). Black workers are nearly two times more likely than white workers to be long-term unemployed[4] and are subject to much higher rates of leaving employment compared with white workers (Assessing Differences 2017, Couch and Fairlie 2010, Couch et al., 2016).[5] In the literature reviewed, this phenomenon is frequently cited as the primary contributor to the overall disparity in unemployment rates for the black population.

Furthermore, women more likely than men to be among the working poor, and both black and Latinx workers continue to be "more than twice as likely to be among the working poor" compared with their white (non-Latinx) counterparts (A profile of the working poor, 2019).[6] Consequently, job quality and the growing duration of unemployment – also unevenly distributed across racial-ethnic groups – are expected to play an increasingly important role in both research and policy development, especially in the context of recent calls for a federal job guarantee (FJG) and Green New Deal (GND); programs intended to stabilize economic growth and reduce economic inequalities.

Despite evidence that the stratified nature of employment outcomes is a product of the discrimination, segregation, and political and cultural norms of societies, mainstream economic research and policy maintains that disparities in employment are the results of innate or cultural differences between demographic groups; some racial-ethnic groups may not have the same capacity or preference for either employment or the education that

[3] We use the following high-level aggregate racial-ethnic categories: black (non-Latinx), white (non-Latinx), and Latinx. Any other categorization used herein will be noted in text.
[4] Those officially unemployed for 27 weeks or more.
[5] Leaving employment is used here in place of other commonly used terms such as separation or exiting employment.
[6] The working poor are those people who spent the previous 27 weeks before being surveyed working or officially unemployed (i.e., meeting the official active-search criteria) but with income below the federal poverty level (A profile of the working poor, 2017).

builds human capital (Darity, 2015). Consequently, conventional measures of labor force participation exhibit significant deficits that may obscure important patterns in employment trends within and between different groups. This is particularly true for the official unemployment rate, which is based on stringent, “active search” criteria.

Recent research highlights opportunities for new uses of publicly available employment data to better understand labor force dynamics by examining transitions in and out of standard categories. In a forthcoming paper by Fullwiler et al., stock-flow analyses of CPS microdata were used to track movements of individuals between different labor force states. Taking both stock and flow estimates into account often yields richer insights compared with conventional measurements, helping to account for the deficiencies exhibited by the conventional use of individual measurements alone. Stock measures indicate the count of those in the civilian non-institutionalized population who are categorized into particular states (e.g., officially unemployed, or not in the labor force) at a specific point in time, which can be used to estimate employment trends month-by-month. Gross flows and transition rates provide insight into additional labor dynamics obfuscated by stock measures. Gross flows expose movement of people between various categories that may not be apparent from stock measures alone. Transitions rates allow us to estimate the percentage of those who transition from a particular labor force state to another or remaining in that state from one month to the next.

The methods introduced by Fullwiler et al. are extended in this paper to compare transition rates between labor force states for different racial-ethnic groups, focusing on the experience of Black and Latinx workers before, during, and after the Great Recession of 2007-2009. First, job availability indicators are specified based on the standard BLS labor force categories to characterize labor underutilization over time. A composite measure of unemployment based on a combination of three of the underutilized labor categories – officially unemployed, involuntary part-time, and want-a-job – is developed for the total population and reviewed in the context of the individual labor force category measures. This composite measure is then stratified by race and ethnicity to compare trends over time in the unemployment rate for black, Latinx, and white groups compared with the general population.

Transitions in and out of different labor force states are estimated from the CPS flow measures to bolster the investigation into underemployment and employment instability over time and by demographic group. The ratio of gross flows from official unemployment to (1) employment, and (2) not in the labor force, are then estimated to characterize the disparity in transitions in and out of each of the major labor force states. The ratio of gross flows for the total civilian non-institutionalized population and each racial-ethnic group are compared to define the relative inequity in the stability of employment, the impact of economic recessions, and the nature of recovery. The results of these analyses are discussed in the context of full employment policies.

In a world where there is a persistent gap between those who want-to-work and job openings, stratification economics provides a helpful frame for why particular groups are overrepresented in those who move from employment to a state of non-employment or underemployment. Stratification economics looks at inter- and intra-group disparities based on relative position, thus in order for us to obtain just and fair access to employment opportunities and outcomes for historically marginalized groups, there will necessarily follow a relative loss in privilege for the dominant group. The stratification approach provides the opportunity to look beyond what can be captured in econometric models and conventional rationale or ideology around measurement of, and policy to respond to, the problem of un- and underemployment. The stratification economics approach “frees the researcher to explore questions involving the inter-group distribution of life chances, including policy tools to achieve more equality, independently of efficiency gains, grounded, instead, in concepts such as human rights and justice" (Lefebvre, *forthcoming*). Adjustments to how economists measure un- and under-employment are needed, as well as the incorporation of historical and qualitative methods to better understand the dynamics of racial-ethnic differences.

Our analysis of stratification through decomposition of the three labor force categories and an extension of recent research on labor force transitions and flows allows for a more robust understanding of uneven outcomes. This

analysis is situated in, and guided by, the stratification economics framework. Stratification economics provides much needed grounding for race and ethnicity in economic research (Darity, et al., 2015).

Finally, in this paper we extend recent work on a Latinx stratification economics (Lefebvre, *forthcoming*). The categorization, measurement, and theorization of Latinxs as an aggregate "Hispanic" analytical category is considered and critiqued in light of existing literature on stratification economics, Latinx studies, and the disparate employment outcomes across Latinxs. We explore (un)employment across Latinxs; including first generation Latinxs, second generation Latinxs, and Afro-Latinxs. The term Latinx is used "as a part of a praxis of intersectionality" as a gender-inclusive aggregate term used interchangeably with Hispanic, but not precluding the use of gender-specific Latina and Latino to refer to those who identify as women or men, respectively.

Stratification Economics and the Resurgence of Full Employment Policies

Calls for more just and equitable social and economic policies are increasingly popular (Paul, et al., 2018; Polling the Left Agenda, 2018); with much energy focused on policies to combat the effects of climate change and promote equitable social and economic change in the form of a Green New Deal (H.Res.109, 2019). Components of the Green New Deal, particularly the inclusion of a Federal Jobs Guarantee, have the potential to significantly reshape the U.S. labor market. A job guarantee program of direct job creation or public service employment has long been advocated for by post-Keynesians—and by feminist and social economists as well—as an alternative for a more inclusive social provisioning process (Alessandrini, 2013; Aja et al., 2013; Todorova, 2013; Forstater, 2006; Murray & Forstater, 2018; Wisman, 2010). Unemployed and underemployed workers will be given the opportunity to earn a living wage that the existing market will not or cannot provide. Even when the official unemployment rate is below the conventional conception of the natural rate of unemployment, wage growth has been weak (EPI, 2019). Working class wage growth has stalled for forty years (CRS, 2019). The jobs guarantee will disproportionately benefit those who have been the least successful at securing work that pays a living wage, provides a benefits package, and affords the opportunity of economic mobility.

Mainstream conceptions and measurement of un- and under-employment place blame solely at the feet of the individual. Labor markets function relatively well and individuals who have invested in their own educational and skill development will be justly rewarded. Therefore, any disparities in employment rates or wages among demographic groups are the results of innate or cultural differences among groups. Some racial-ethnic groups may not have the capacity that others do or discount the importance of education that builds human capital.

Stratification economics offers a conflicting perspective. Group dynamics become the focus of study, not individuals. These groups can, and do, engage in coordinated schemes to secure advantages for group members at the detriment of other groups. This can result in absolute material gains for members of the racial-ethnic group, but more importantly, these actions create and maintain relative advantages over other groups.

Conceptions of discrimination from the work of Gary Becker have dominated the economics discipline's responses to those practices in labor markets for fifty years (Becker, 1971). Absent legal regimes like South African Apartheid or Jim Crow in the U.S., invisible hands will punish employers who engage in discriminatory hiring practices. Foregoing superior job applicants will result in less efficient production and increased costs for the discriminating party. Employers who do not engage in discriminatory hiring practices will outperform discriminatory employers. This is at best a hopeful, and naïve, narrative that regards employment discrimination as an individual act, not one that is implemented by coordinated groups of individuals who are more interested in maintaining their relative status than absolute material gains.

It is no surprise to those working from the stratification economics framework that discrimination persists in U.S. labor markets fifty years after the death of Jim Crow. Legal avenues of discrimination have been eliminated but de facto practices carry on. If a layperson were provided with statistics on racial-ethnic gaps in educational attainment, wages, segregation in schools and neighborhoods, and social and economic mobility, it would be

difficult to differentiate between life under the Jim Crow regime and contemporary America (Rothstein, 2013). In several ways, racial-ethnic inequalities in the economy are growing (Cajner, 2017). The uneven impact of the Great Recession explored below expose persistent white-advantage in employment, keeping racial-ethnic groups in their historically marginalized social positioning.

The black unemployment rate remains almost twice the white unemployment rate. This is a relationship that is more empirically sound than the Phillip's Curve but receives considerably less attention from monetary authorities and policymakers (Powell, 2018). In the absence of explicitly racist legal regimes, neoclassical economists point to Becker, mumble some platitude about human capital, and wipe their hands of the matter. But the stratification of the U.S. employment outcomes remains a persistent thorn in the side of jobseekers from marginalized communities. Racial-ethnic groups affected by labor market discrimination, and the framers of the Green New Deal and a Federal Jobs Guarantee don't have the luxury of believing in the fantasy of economists' labor market theory. Policymakers will have to address the ugly reality of discrimination.

A Federal Jobs Guarantee (FJG) or public service employment (PSE) program is expected to be included in the Green New Deal legislation. The jobs guarantee will disproportionately benefit those at the edges of the labor market (Wray, et al., 2018). Given the historical legacy, and unfettered continuance, of labor market discrimination, the demographics of Green New Deal participants will be skewed towards those who experience discrimination in labor markets and have lower levels of education and skill accumulation. Non-white racial-ethnic groups, the less formally educated, and women will be overrepresented (Wray, et al., 2018). The design of employment policy within the Green New Deal should take this into consideration. We explore several reasons why this is the case below.

Prejudice in labor markets hurts qualified individuals from marginalized racial-ethnic groups and rewards less qualified applicants from the prevailing racial-ethnic group. Therefore, the reserve army of the unemployed is filled with individuals who are perfectly qualified for private sector work save for being clocked as a member of a marginalized racial-ethnic group. The aims and implementation of the jobs guarantee program need to account for this fact. Unemployed does not mean unqualified. Advocates of the Green New Deal must decisively confront and correct any notion that a FJG is a make-work program for the unproductive and undeserving.

Stratification economics explains that relative positions are more socially important than absolute gains or losses of income or material well-being. This is important for a few reasons. There will be political resistance from the dominant racial group because a FJG, which pays a living wage, threatens to close the racial income gaps at the bottom end of the labor market. Maintenance of the relative advantage dominant groups enjoy often means sacrificing the well-being of some of their own. If wage differentials are not maintained, *those* people will not be relegated to conditions of abject poverty, which is, after all, their proper place. A job guarantee with living wages threatens to upset historical and existing racial-ethnic economic hierarchies. Even if participants are paid working-class wages this will still be enough to spur resistance.

From Franklin D. Roosevelt's New Deal and Committee on Economic Security and Martin Luther King Jr.'s March on Washington for Jobs and Freedom to Rev. Barber's reinvigoration of the Poor Peoples Campaign and 2020 U.S. democratic presidential candidates in support of a Green New Deal; full employment policy is on the radar once again. If we are to design policy interventions and a permanent policy for full employment it is important that we have a robust way to measure un- and under-employment and fully grasp the current and historical dynamics of discrimination behind employment inequality. With an unwavering reliance upon the moving target of a non-accelerating inflation rate of unemployment (NAIRU) and measure of unemployment only counting those who have actively searched in the past four weeks and are available for work in that week; the current tools at the disposal of economists are insufficient for this task. With NAIRU as the target and Official Unemployment (U-3) as the measure policymakers simultaneously relegate millions of workers to precarious conditions and blame them for their inability to access secure employment.

Our analysis of CPS microdata is motivated by several considerations. First, we aim to explicitly extend research by those developing stratification economics, which demonstrates the importance of the historical and current forms of racial-ethnic socio-economic inequalities, to measurement of labor underutilization. We also situate our analysis of Latinxs in the CPS within stratification economics by taking initial steps to develop indicators of labor underutilization from the CPS, which while imperfect begin to address the heterogeneity of Latinx group positionality, not tacitly accepting the categorization provided by this particular set of survey data. What can we learn from a critique and decomposition of traditional labor force categories (i.e., employed, officially unemployment, and not in the labor force) and analysis of ascriptive inequality? Ascriptive group identity has generated persistent inequality in access to secure employment, but with different dynamics across and within groups based in the intersection of various group-based identities. The section using the CPS to examine Latinx outcomes is included to demonstrate these dynamics in basic descriptive analysis. In light of the unevenness of New Deal era social policy programs we can see how important this will be for future efforts to establish a just and sustainable environmental, social, and economic system (Forstater, 2006; 2007; 2012).

Background and Methods

The primary datasets used to develop both stock and flow measures of employment by demographic group were derived from the U.S. Current Population Survey (CPS) microdata for 1998-2019. **Figure 1** shows the decomposition of standard labor force categories introduced by Fullwiler et al. We rely upon the work done by IPUMS-CPS to link individuals and households the 16-month rotating panel structure of the CPS monthly release (Flood, et al., 2018). A detailed summary of the methods used here can found in Fullwiler, et al., forthcoming. We also 'deNUNify' the monthly estimates from the CPS using the procedure introduced by Elsby (2015) and used in Mohr (2019)[7] to address misclassification of labor forces status in the CPS survey.

Figure 1: Decomposition of Labor Force Categories (from Fullwiler, et al., *forthcoming*)

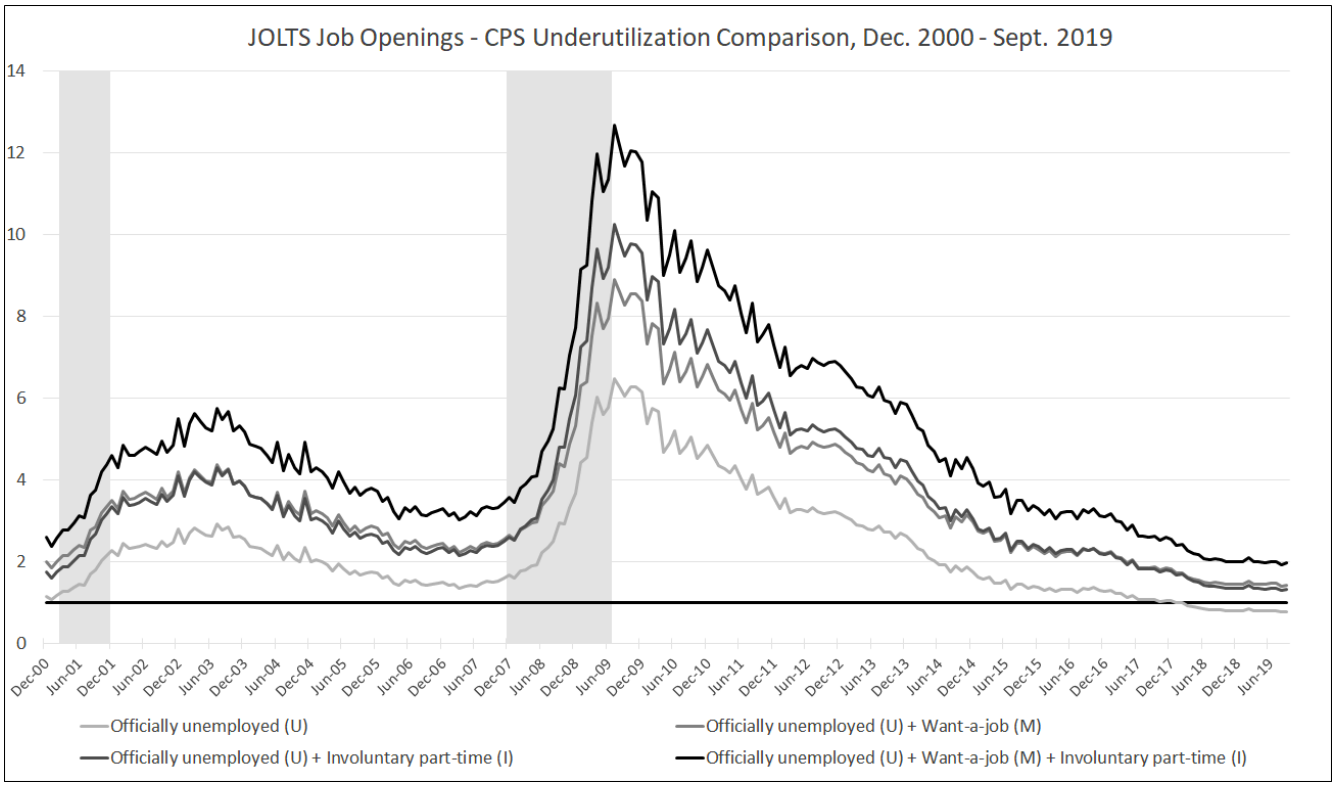
BLS Category	*WTAJ* Category	*WTAJ* Classification Criteria
Employed	*F* (Full Time)	Persons employed and working a 35+ hours per week.
Employed	*V* (Voluntary Part-Time)	Persons employed and working part-time hours, who do not wish to work full-time hours. Also referred to as employed part-time for noneconomic reasons.
Employed	*I* (Involuntary Part-Time)	Persons employed and working part-time hours, who wish to work full-time hours. Also referred to as employed part-time for economic reasons.
Unemployed	*U* (Officially Unemployed)	Persons who are not employed, want a job now, have actively sought for work in the past four weeks and are available to start a job if offered.
Not in Labor Force	*M* (Want-a-Job)	Persons who want a job now but have not looked in the past four weeks, but have actively searched for one in the past twelve months.
Not in Labor Force	*R* (Retired)	Persons who answered that they do not want a job, are not employed, and self-identify as retired.
Not in Labor Force	*O* (Other)	Persons who answered that they do not want a job, are not employed, and do not self-identify as retired.

[7] Elsby et. al. (2015) propose an adjustment procedure to address potential misclassification that takes advantage of the rotating panel structure of the CPS. This approach, called deNUNification, searches individual labor force status histories for frequent transitions back and forth between the same two labor force statuses.

While we argue that the three major labor force categories[8] obscure significant movements across labor force states and there are biases[9] in the CPS survey, in **Figure 1** from Fullwiler et al., following recent developments in the transition rate literature, we recommend a further decomposition and use of transition rates and gross flows to help improve estimates of actual labor force underutilization and shed light on the nuances of employment inequality between racial-ethnic groups. The official measure of unemployment (U) only includes unemployed persons who have looked for work in the last 4 weeks. The monthly CPS microdata estimates for U was combined with estimates for involuntary part time employed (I) and for persons not in the labor force that want a job (M) to develop a general rate of unemployment and underemployment among the civilian non-institutionalized population, UMI.

Chronic involuntary unemployment is an economic problem exacerbated by, and reinforcing, uneven employment outcomes. A key element of our analysis is the enduring gap between those who want to work and the number of job openings month over month. **Figure 2** shows a simple monthly indicator of job availability, dividing the number of officially unemployed, involuntary part-time, and those categorized as wanting a job according to the BLS by job openings reported in the Job Openings and Labor Turnover Survey (JOLTS). A value greater than one indicates that the number of people in the particular category of labor underutilization state is greater than the number of job openings that month. In other words, there are not enough jobs for the number of people willing and able to work.

Figure 2: Job openings (BLS JOLTS) vs. unemployment and underemployment (CPS)



[8] For more details on the BLS labor force classifications, see https://www.bls.gov/cps/definitions.htm.
[9] The CPS rotating panel structure, while beneficial in many ways, also gives rise to several well-known biases. Several of these are especially important in estimating the prevalence of unemployment. On the issue of panel conditioning, see Halpern-Manners & Warren (2012). The general problem of non-random nonresponse and attrition is discussed in Schifeling et al. (2015). For an investigation of attrition in the CPS as it impacts the reliability on unemployment rate estimates, see Krueger et al. (2017). Amir Khaleghi (forthcoming) has shown that the problem identified by Krueger et al. has continued and is still prevalent.

The comparison of labor force states in Figure 2 illustrates a persistent deficit of job openings in the U.S. It was only in December 2017 that the job availability indicator for the officially unemployed – the most conservative category of labor underutilization – dropped below 1, indicating that the number of job openings outweighed the number of officially unemployed for the first time since 2000. The officially unemployed are not likely to represent the full extent of slack in the labor market given that the sample selection criteria depends on how recently someone actively searched for work, not whether they currently want – or need – new employment. It may be that those categorized as 'officially unemployed' are closer in attachment to the labor force than others conventionally classified as not in the labor force (Forth, Riddell & Jones 2017). While it is assumed that this trend means the U.S. economy has reached full employment, the trends in the other underutilization categories along with clear deficits in the conventional measure for official unemployment suggest otherwise.

Existing evidence suggests that the aggregate trends in unemployment shown in **Figure 2** – official or unobserved – are likely to vary significantly between different racial-ethnic groups. Trends in U-3 – the official unemployment rate – overall and by racial ethnic group are provided for the civilian non-institutionalized population age 16 and over in **Figure 3**, and for the prime-age population in **Figure 4**.

Figure 3: U-3 official unemployment rate comparison (age 16 and over)

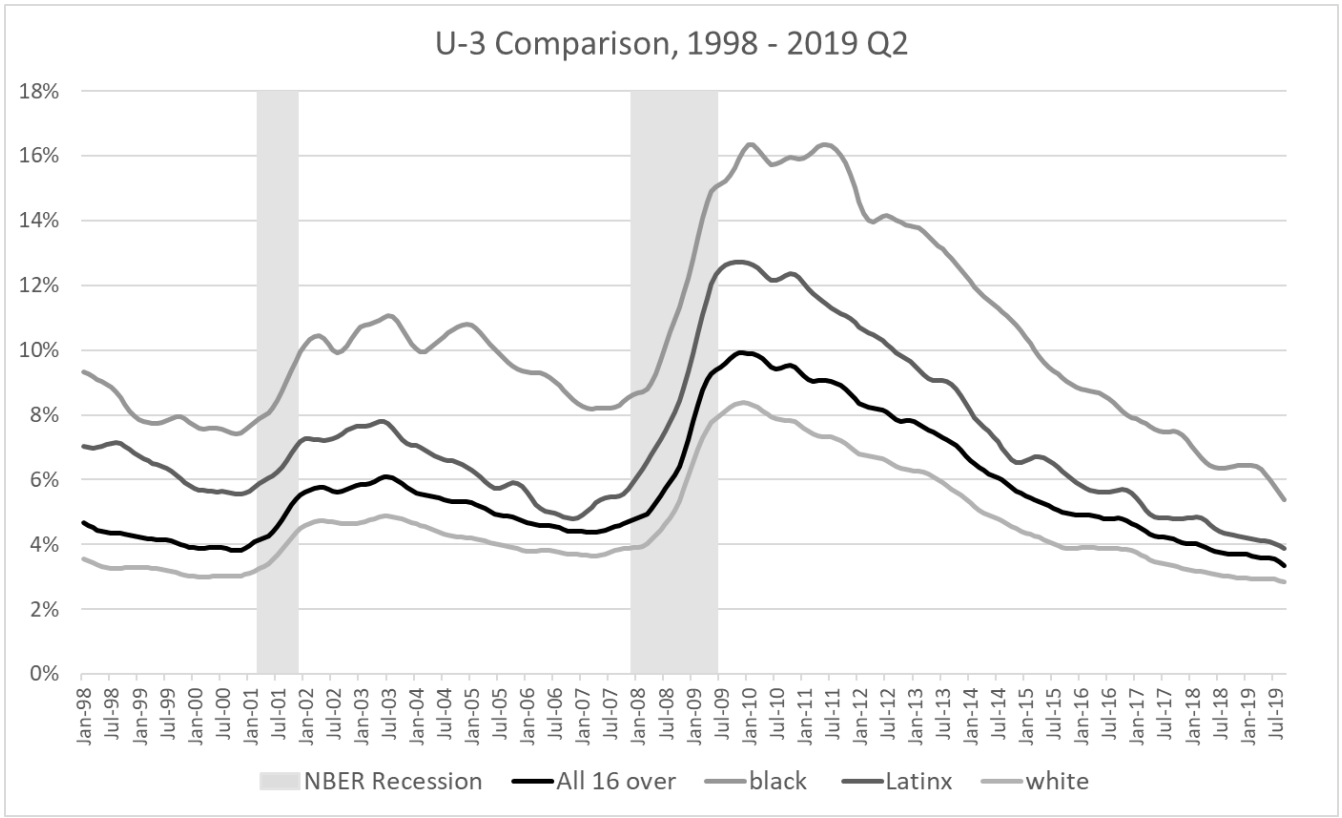
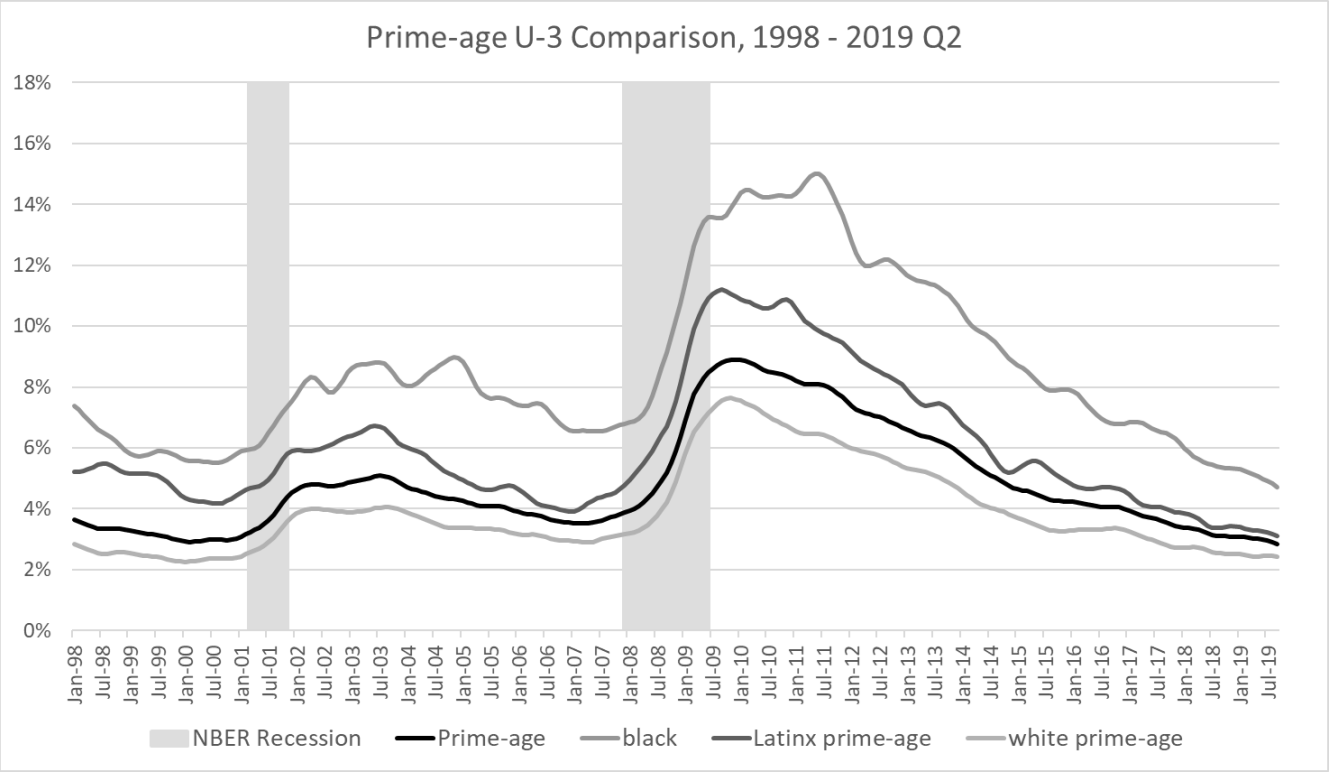


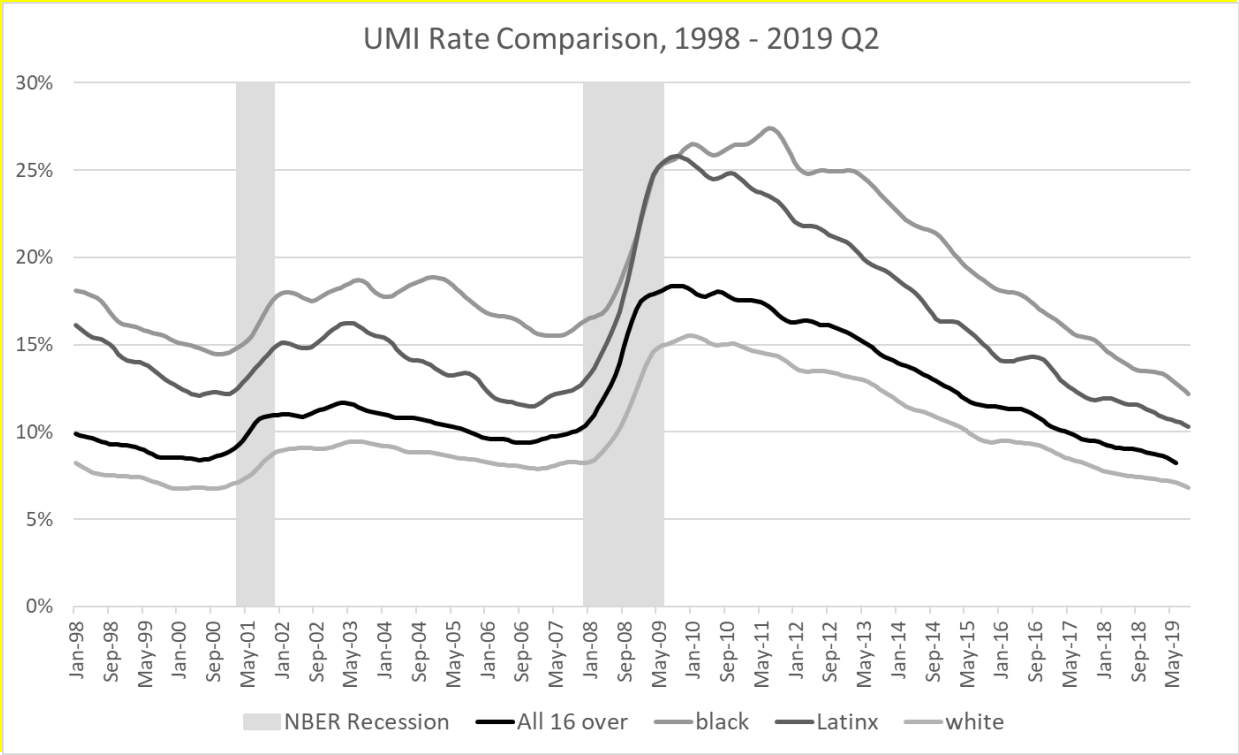
Figure 4: U-3 comparison (prime-age)



These results in **Figures 3-4** offer a first glimpse at the degree of labor force stratification by racial-ethnic group based on this stock measure of monthly official unemployment rates. Black workers consistently face an unemployment rate double that of the total population. The Latinx population faces official unemployment rates almost 1.5 times that of white workers during and after the recent recession, though the gap narrows towards the end of the subsequent economic expansion, reaching levels below the aggregate rate of official unemployment. It is also apparent that the gap in the unemployment rate is highest in the initial months of the recession. While U-3 (age 16 and over and prime-age) have reached lows below those before the Great Recession, the rate of transition between official unemployment and full-time employment for all groups discussed here have failed to fully recover to pre-recession levels, see Appendix 3 and **Figure 15**. Since 1998, during each expansionary period the aggregate UF transition rate as failed to reach near the heights of the previous expansionary period (Mohr, 2019). The only exception to this finding is white 16 and over UF transitions rates that have reached just five percentage points below the mid-2000s expansion high of 11.9 (see Appendix 3).

Figure 5 shows the UMI rate comparison overall and by racial-ethnic group for the civilian non-institutionalized population age 16 and over. Constructed from monthly CPS microdata, the UMI rate represents the percent of the civilian non-institutionalized population in the officially unemployed, want-to-work, or involuntary part-time categories. While it is generally argued that changes in the unemployment rate are driven by layoffs and hiring, patterns in **Figure 5** suggest that changes are in large part a consequence of the classification between various labor force states based on what are arguably arbitrary criteria, not fit for the purpose of understanding labor underutilization (Fullwiler, et al., *forthcoming*).

Figure 5: UMI rate comparison (age 16 and over)



Incorporating gross flows allows us to examine how different groups were hired into a finite number of employment opportunities each month. **Figure 6** shows that gross flows of people categorized as not in the labor force to employed (NE) were substantially higher than the gross flows of people officially unemployed to employed (UE) throughout the full study period; more people transitioned to employment from the not-in-labor-force category than did people categorized as officially unemployed. **Figure 7** shows similar trends in the gross flow of people categorized as 'other' to the full- or voluntary part-time employment categories (O to FV) compared with the gross flow of officially unemployed persons to full- or voluntary part-time employment (U to FV), with the exception of the recessionary period from 2010-2012. These patterns in gross flows illustrate the complexity of labor force dynamics and the limitations to conventional employment measures relying on the official unemployment rate alone; there is clearly significant churning in the labor force status of people without stable employment that is not captured by measures based solely on the official unemployment rate.

Figure 6: Gross flows from not-in-labor-force to employed (NE) and officially unemployed to employed (UE)

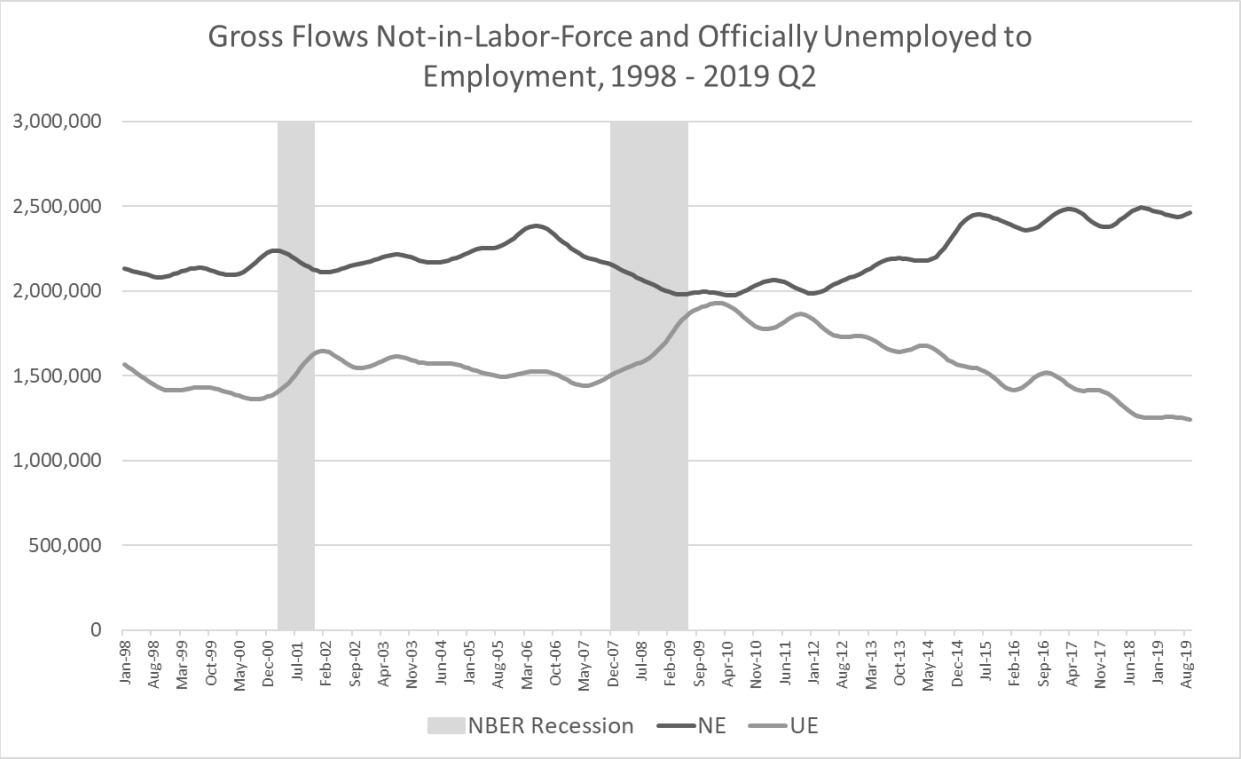
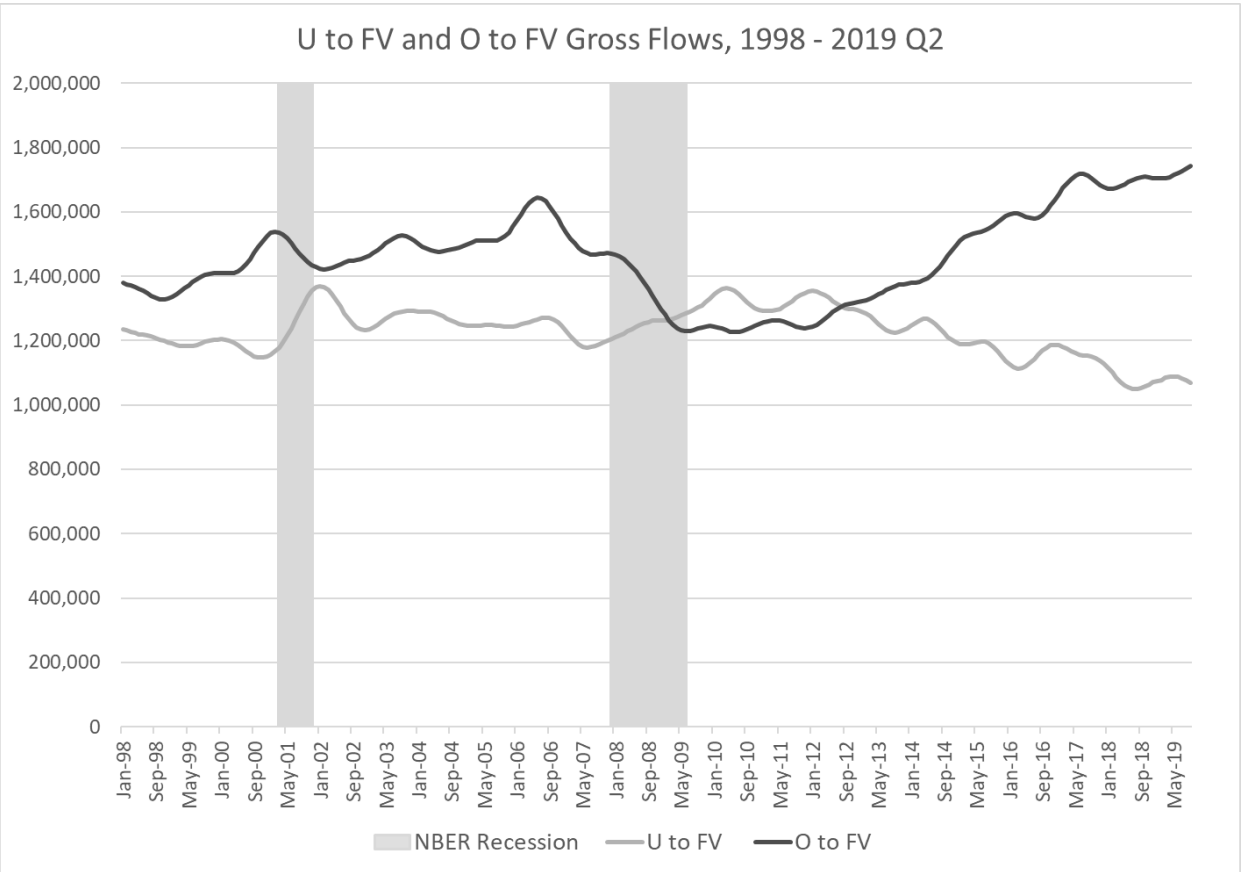
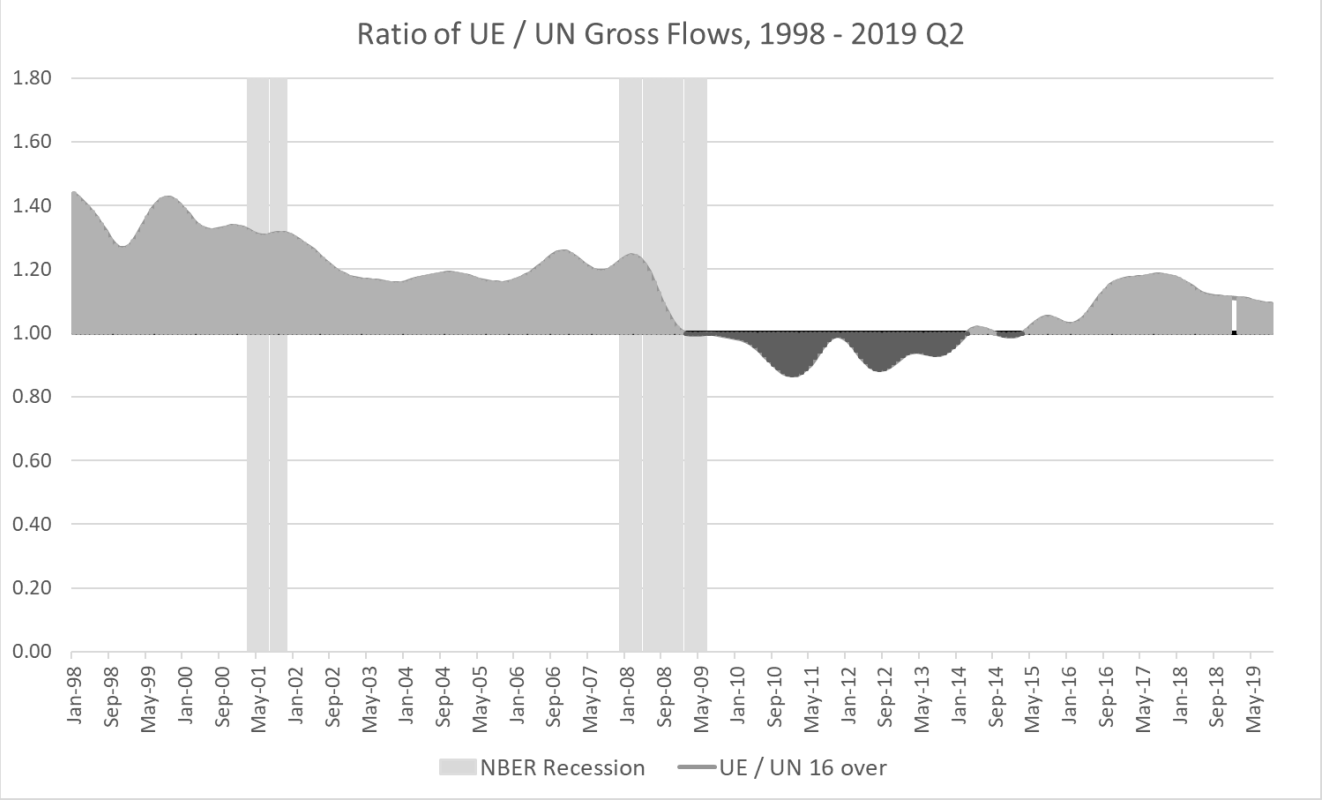


Figure 7: Gross flows from officially unemployed to full-time or voluntary part-time employment (U to FV) and from the 'other' not-in-labor-force category to full-time or voluntary part-time employment (O to FV)



Across both heterodox and conventional economic research, the stylized fact that black workers are 'first fired' is consistently supported (Couch and Fairlie, 2010). Couch, et al., 2016, find that "the racial gaps in the risk of job loss are the most important drivers of racial unemployment gaps and can also account for a major part of the differential cyclicality of unemployment." We find this phenomenon represented in our comparison of flows between official unemployment and wider measures of unemployment and underemployment and employment. The ratio of gross flows from official unemployment to employment (UE) and official unemployment to not in the labor force (UN) in **Figures 8-10** for all workers 16 and over, black workers, and white workers illustrates a severe racial disparity in labor market dynamics over time.[10] Ratio values greater than 1 (light grey) indicate that the number of officially unemployed who flowed into employment is greater than the number who flowed out of the labor force, traditionally defined. For example, a value of 1.4 indicates that there were an estimated 1.4 workers moving into employment for every officially unemployed worker flowing out of the labor force.

Figure 8: The ratio of UE/UN gross flows (all age 16 and over)



[10] UE/UN gross flow ratios for Latinx and prime-age workers are included in Appendix 1.

Figure 9: The ratio of UE/UN gross flows (black, age 16 and over)

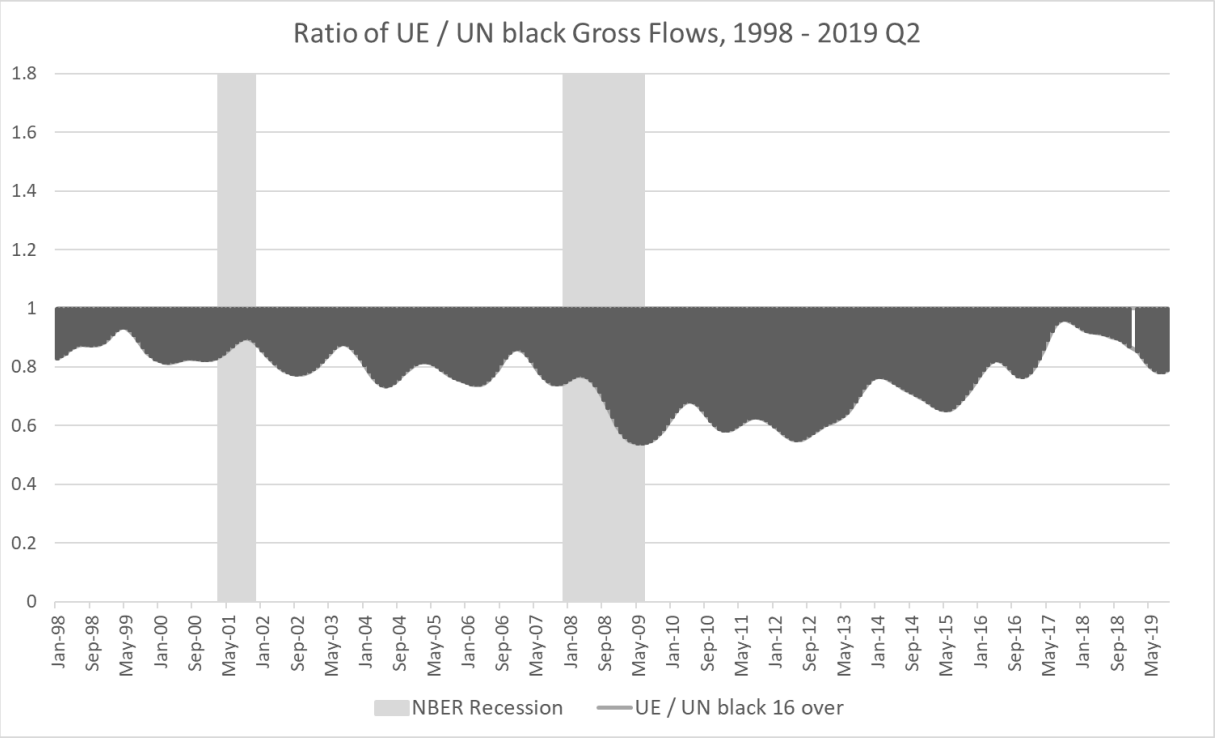


Figure 10: The ratio of UE/UN gross flows (white, age 16 and over)

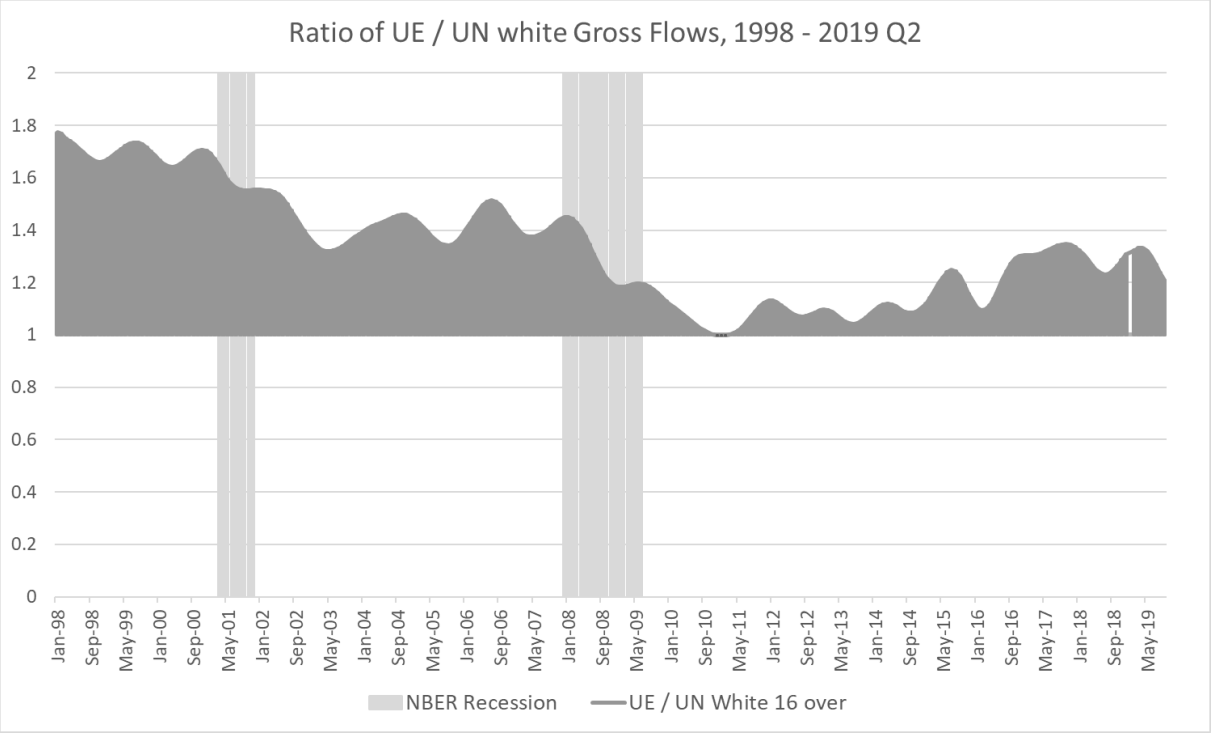


Figure 9 shows that the ratio of UE/UN for black workers has remained below one throughout the entire study period; at no time from 1998 to 2019 have black workers flowed into employment at a greater rate than black workers leaving the labor force. In contrast, the ratio of UE/UN for white workers has remained above one for the entire study period. These trends indicate that, not only is there a well-documented and clear disparity in employment rates between black and white populations in the U.S., the access, stability, and quality of employment is vastly different as well. In combination with the raw estimates for gross flows between labor force categories in **Figures 6-7**, these results suggest that there is significant churning in employment; that the majority of people falling into auxiliary unemployment or underemployment categories are in fact actively engaged in the labor market and attempting to gain employment; and that the burden of insufficient and unstable employment disproportionately impacts black and other non-white socially disadvantaged groups.

Comparing UF flows over the business cycle (Appendix 3 and **Figure 15**) we find that UF transitions for black workers (prime age and 16 and over) remain consistently below that of all other aggregate racial-ethnic groups present here. Black workers also face greater volatility in black UF transition rates during expansionary periods and downtowns, and is more pronounces for prime-age blacks. This volatility is also apparent in the UF, UV, and UI transitions presented in Appendix 2. Prime-age black and Latinx workers saw the greatest magnitude decline in U to F transition rates, decreasing by 7.4 and 12.8 percentage points, respectively, during the 2007-2009 recession. Prime-age black workers then saw one of the shortest periods of post-2009 expansion, peaking at a UF rate of 10.2 in July of 2017, compared to prime-age white workers which peaked at a rate of 13.0 in April or 2019. Prime-age black UF rates peaked a year earlier than the all prime-age workers before the 2001 and 2007-2009 downturns.

This analysis builds upon previous research on alternative economic indicators from the Global Institute for Sustainable Prosperity. In this paper we expand upon the literature summarized and extended in Fullwiler, et al. (*forthcoming*); Mohr, 2019; and Mohr, et al. (*forthcoming*). Several key findings are important to restate here:

1. Many national economies, including the U.S., have been studied with the transition rate method (Shimer, 2012; Elsby et. al, 2013; Jung and Kuhn, 2013; Riddell and Jones, 2017).Through initial investigation of a prominent new line of research on labor force transition probabilities using individual-level records from CPS microdata, we found that there were a number of people who were not counted in either U-3 or the broader measure of U-6 who were getting jobs (e.g. Hornstein et al., 2014). We utilize stock-flow analysis of the CPS to track and decompose changes in labor force statuses. Flow-based analysis involves using the CPS microdata to track movements of individuals between different labor force states. Taking both stock and flow measures into account often yields richer insights, as each can remedy the deficiencies and blind spots of the other.
2. The socio-economic characteristics of workers defined as involuntary part-time are more similar to those of the officially unemployed, rather than those classified as voluntary part-time and full time, justifying the inclusion of such a category in a labor underutilization measure (Canon et. al 2015). We find and summarize supporting literature in Mohr, et al. (forthcoming) that a large portion of those transitioning into F or V come from I, which is primarily composed of those who stay within the same firm (Borowczyk-Martins and Lalé, 2016; Rambachan, 2017). This has important implications for those who stay in a job, especially when it is the case that black workers are more likely to transition out of employment.
3. Workers who are employed full-time have a higher probability of transitioning to involuntary part-time work rather than a state of unemployment; moreover, that the majority of transitions between these two states take place within the same firm, meaning such changes in states do not "redistribute" workers across employers (Cannon et. al 2015; Borowczyk-Martins & Lalé 2016; Rambachan 2017).
4. Riddell & Jones (2017) decompose those non-employed into unemployed, marginally attached, and non-attachment; finding that fluctuations in U-3 are largely the result of changes in the marginally attached status. Showing the weaknesses of the trichotomy of labor force states based on search criteria; ultimately arguing, "…wanting work and not wanting work [is] more important than the margin between search and

non-search" and imply further decomposition of the original three labor force states is critical to gaining the most comprehensive understanding of the current state of labor underutilization (Jones & Riddell 2017: 27). Movements between want-a-job states and non-want-a-job states may be a more important consideration than flows into employment. And without enough jobs to transition into, transitions into employment cannot be equated with an 'attachment' concept. We find in Fullwiler, et al., *forthcoming* that non-employed people who are categorized in the CPS as currently wanting-a-job (those in U or M) make up less than 30% of transitions into F or V from a non-employed state.

5. Finally, employer hour preferences dominate worker labor supply preferences for hours (Pencavel, 2016). In any given month there are a finite number of jobs, or hours, that employers are looking to fill for all of those wanting to work. This in an economic system where across OECD countries working hours have been monotonically decreasing in the past two and half decades (Dolton, 2017). Given Pencavel's (2016) findings the differences in transition of different groups into employment is not likely to depend only upon the characteristics of workers, employer preferences play a role that should not be ignored. Thus, the racial-ethnic composition of those who transition ought to be investigated. Cajner et al. (2018) find that "PTER has also tended to be higher for blacks and Hispanics at the time of the Great Recession, and [has] remained stubbornly high for blacks years into the recovery."

Adapted from Fullwiler, et al., *forthcoming*; Mohr, et al. (*forthcoming)*; and Mohr (2019)

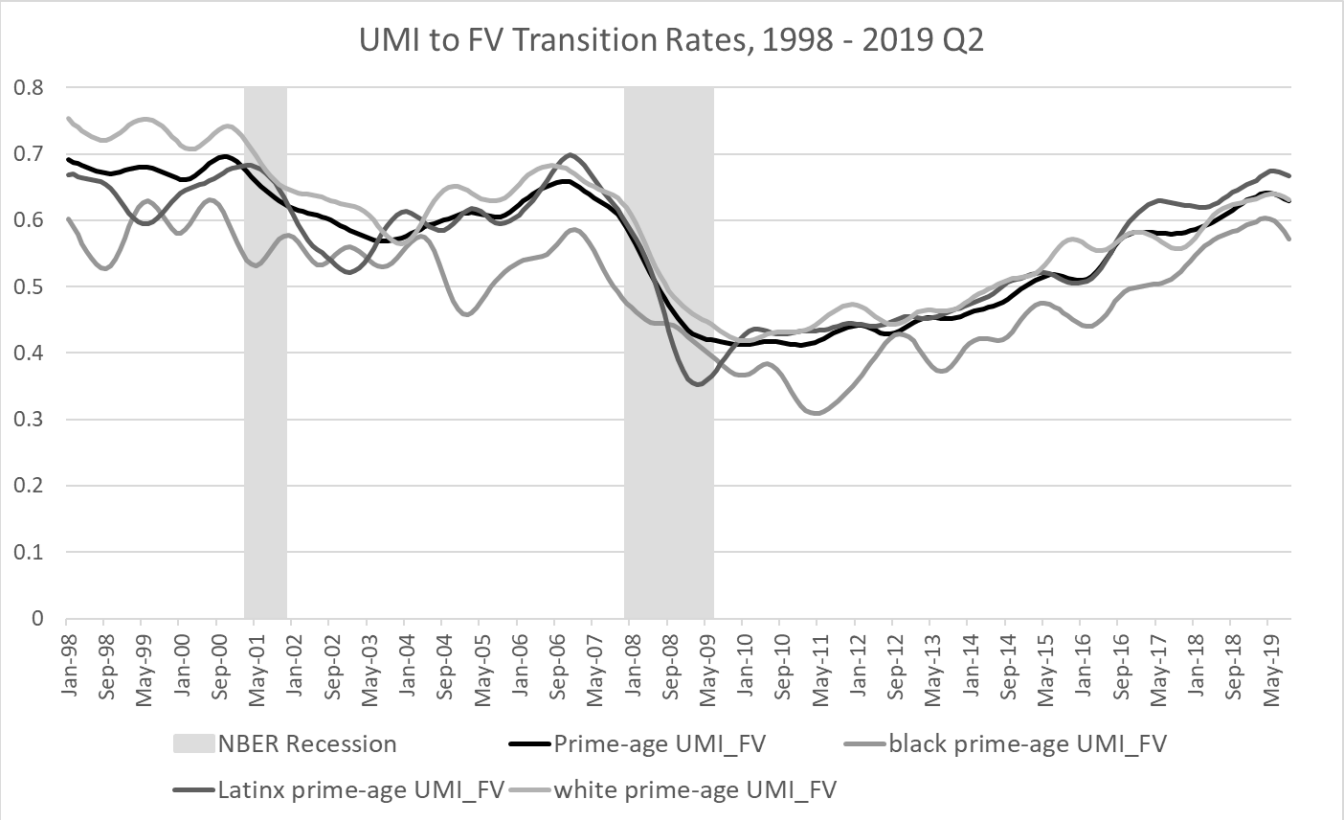
Insights from a decomposition and demographic analysis of the U.S. Current Population Survey, 1998 - 2019

Several conclusions can be made in light of what we have learned from the development of stratification economics research and recent literature applying the transition rate method to investigations of disparate employment outcomes. Conventional indicators like U-3 and U-6[11] and those coming out of the recent literature cited and extended here demonstrate a clear and persistent inequality in employment outcomes across groups. Many pages of economics journals have been spent investigating uneven employment outcomes between white and non-white groups and the impact of these disparate outcomes on those from non-white groups (Yaya, 2018). Here we explore the indicators of employment outcomes across groups; extending recent research exploiting the longitudinal aspects of the U.S. Current Population Survey (CPS) to an alternative decomposition of labor force states and demographic analysis. The indictors demonstrate a persistent recession among black workers. Vuolo, et al. (2017) find that while there was a proportional "recession-based decline in job prospects," during the last recession white workers saw "favorable responses from employers at rates similar to African Americans" during the expansion before the recession.

The figures below detail the stratification in employment outcomes across black, Latinx, and white prime-age workers over the incomplete recovery from the Great Recession. The labor underutilization measures chosen here rely upon the literature summarized in Fullwiler, et al., *forthcoming,* Mohr, 2019, and Mohr, et al., *forthcoming* (e.g., the key insight from Riddell & Jones (2017) summarized above). First, we compare the transition rate from official unemployment, want-to-work, and involuntary part-time into full-time or voluntary part-time employment.

[11] U-6 is one alternative measure of labor underutilization published by the BLS, and represents the total unemployed, plus all persons marginally attached to the labor force, plus total employed part time for economic reasons, as a percent of the civilian labor force plus all persons marginally attached to the labor force

Figure 11: Transitions from un- and under-employment to full-time and voluntary part-time employment



The transition rate for black workers out of our underutilization categories (U, M, and I) into full-time or voluntary part-time employment is the lowest in the 1998 to 2019 period with the exception of three instances where the Latinx rate of transition in employment drops below black rates. White workers see the highest rate of obtaining full-time or voluntary part-time hours. Notably, none of the labor underutilization to employment transitions presented here have reached the peak rate from before the Great Recession.

Part-time employment grew along with unemployment during the recession (see **Figure 12)**. Similar to those who are unemployed, different groups leave involuntary unemployment at different rates (Cajner, et al., 2017). Couch, et al. (2016) also consider racial-ethnic differences in transitions into involuntary part-time employment. Cajner, et al. (2017) also support the conclusion that job loss, the "first fired" phenomenon, is the most significant factor behind racial-ethnic unemployment gaps. Couch, et al. (2016) find that while part-time employment grew for all racial-ethnic-gender groups, part-time employment among Latinx and white men begin to decline much earlier than other groups promptly after the recession. In fact, part-time employment increased up until 2013 for black men. We can see clear differences between I to F transition rates by racial-ethnic groups over the business cycle in **Figure 13**. There are clear divergences between Latinx and black prime-age IF transition rates. Latinx prime-age IF transition rates are most consistently above those of other racial-ethnic groups presented here.

Figure 12: Involuntary part-time stocks by racial-ethnic group, 1998 – 2019 Q2

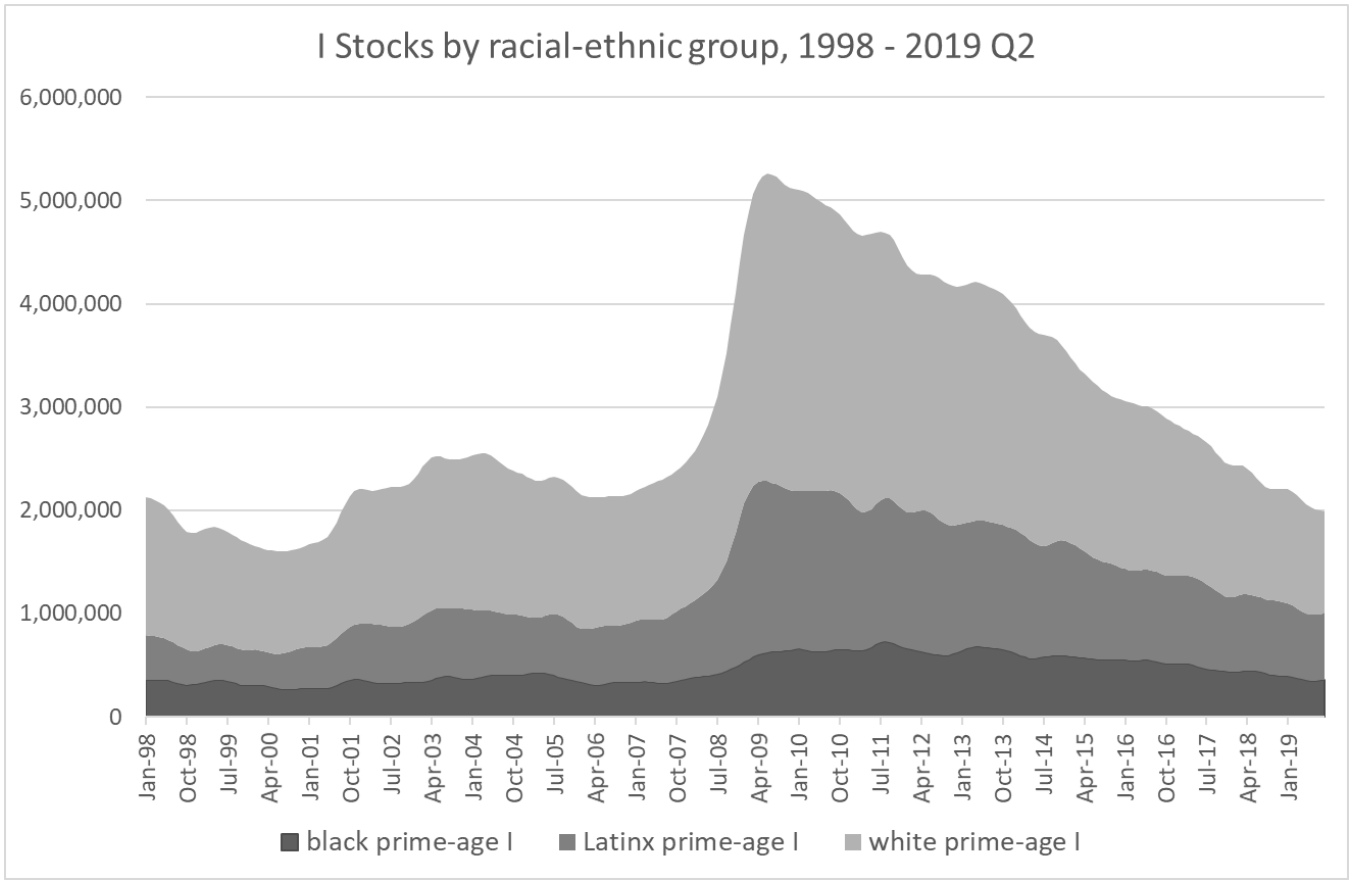


Figure 13: I to F Transition Rates, 1998 – 2019 Q2

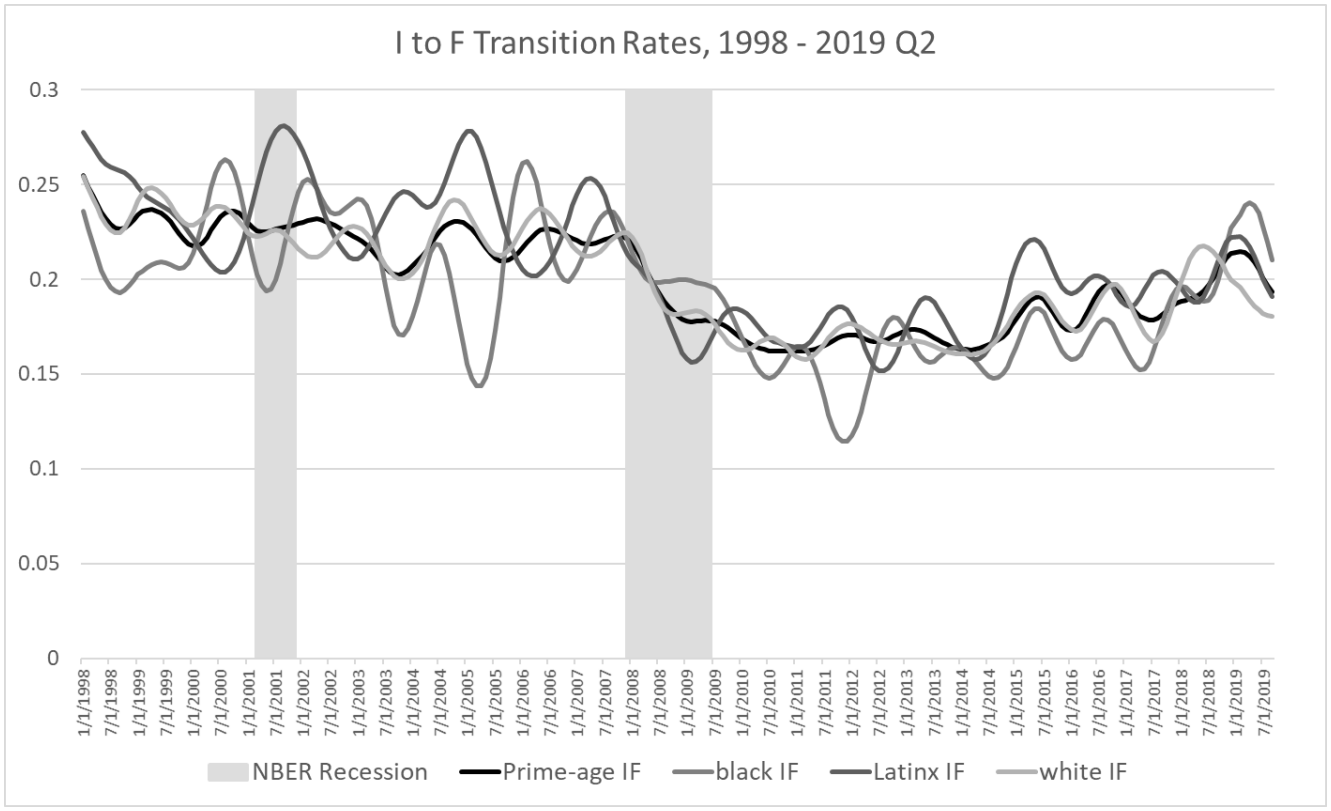
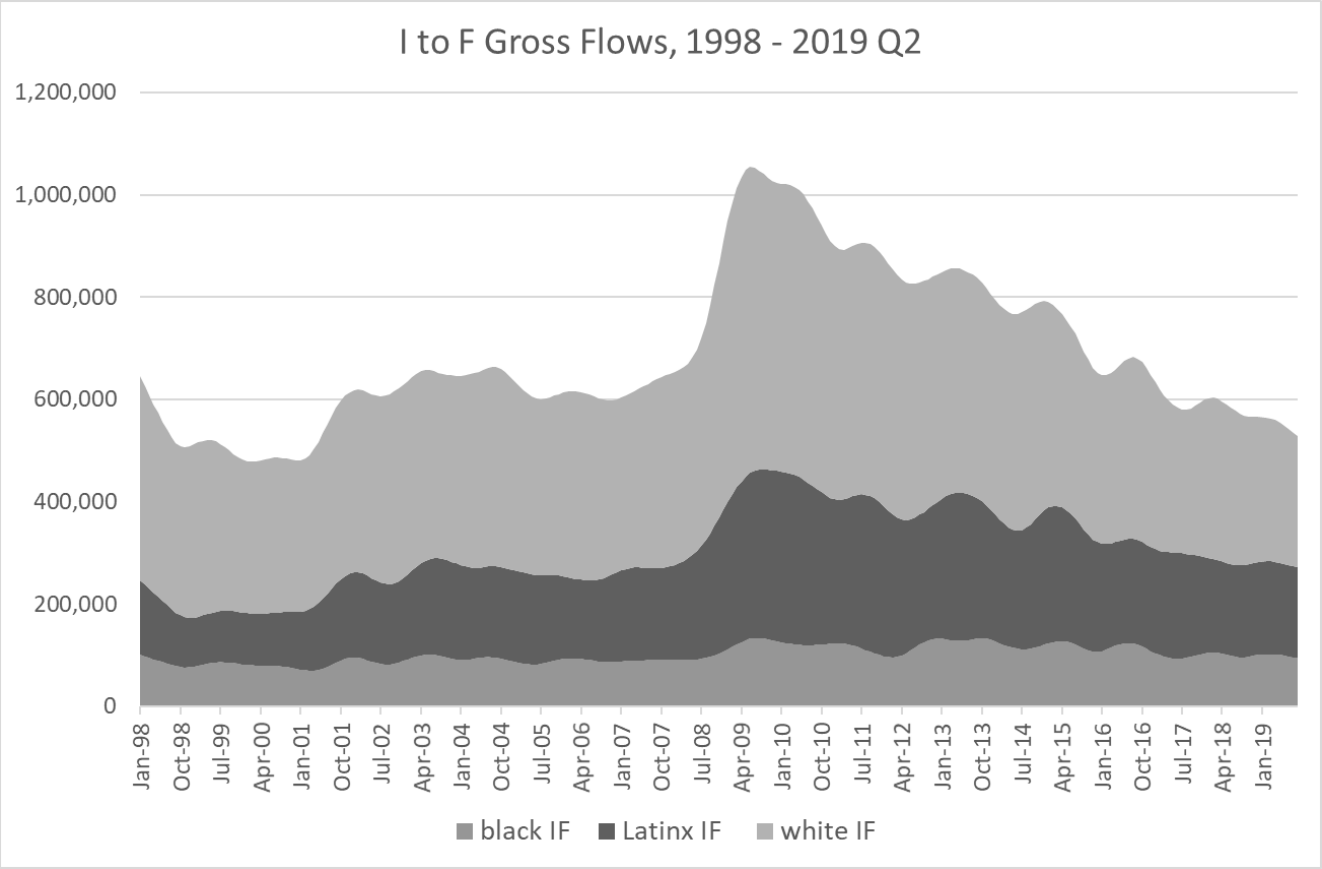


Figure 14: black, Latinx, and white (age 16 and over) Gross Flows, 1998 – 2019 Q2



I to F gross flows by racial-ethnic group show that the I to F rate for black workers grew up until 2013. **Figure 14** also demonstrates that Latinx I to F gross flows decreased more slowly than white I to F gross flows. It is important to remember that this is related to the findings that IF and FI transitions are generally within the same firm. Black workers thus see a lower rate of IF transitions as they are most likely to already be unemployed and face transitions out of employment at a greater rate than any other racial-ethnic group.

Latinx Stratification Economics and Employment Outcomes

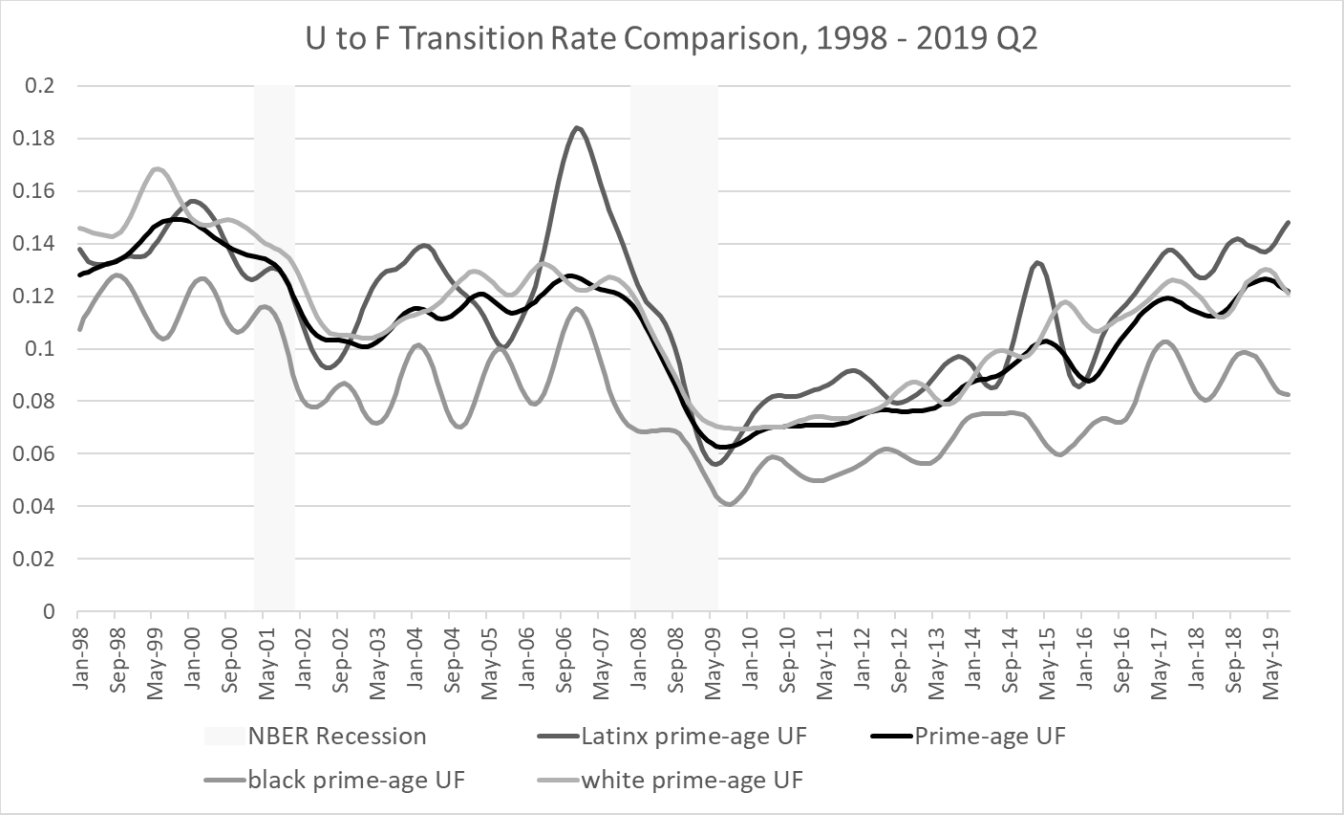
In this section we begin the project of applying stratification economics to the exploratory analysis of decomposed CPS transition rates, gross flows, and stocks. One rationale for using the term racial-ethnic in place of simply race and ethnicity is important to emphasize in our analysis of within Latinx group differences in employment outcomes[12]. It rests primarily upon the racialization of the term Latino or Hispanic; where "racialization of the term Latino obscures the whiteness of white Latinos and the blackness of black Latinos" (Davila, 2008 cited in Lefebvre, 2019). Exploiting the CPS to the extent possible to explore differences within the aggregate grouping of Latino/Hispanic is a starting point, but this also motivates our call for an extension of our macro-level analysis to qualitative methods that allow us to ascertain the extent of heterogeneity in economic and social positioning of various Latinxs. Such methods allow us to explore the intersections of identity within Latinxs. Alternative survey instruments and qualitative methods in the form of focus groups and structured interviews most predominantly used outside the discipline of economics can be used to better understand and

[12] Loscocco (2017) "the term racial-ethnic denotes the slipperiness of the concept of race and its connection to ethnicity in the minds of decision-makers."

measure un and under-employment across and within groups and provide insight into potential policy mechanisms for addressing inequitable employment outcomes.

A survey conducted for National Public Radio, the Robert Wood Johnson Foundation, and Harvard T.H. Chan School of Public Health found that one third of Latinxs report facing anti-Latino discrimination when applying for jobs (Discrimination in American, 2017). In this section we further decompose aggregate measures presented above in order to explore the impact of race-ethnicity discrimination on within-group Latinx employment outcomes. As Ronald Mize says in his book Latina/o Studies, Latinx Studies as a field has largely concluded that there is no essential Latinx identity, devoid of gender, class, or race (Lefebvre, 2019). This becomes apparent when we compare these basic descriptive statistics of labor underutilization. Aggregate racial-ethnic categories obscure important within-group differences. In order to fully understand how labor policies like a FJG will affect existing disparities in employment outcomes an within-group is necessary. In this section we look into differences across Latinx groups and compare first-generation Latinx and black employment outcomes. While workers hold more nuanced identities which affect their position in stratified employment outcomes than those explored here the analysis in this section demonstrates the importance of intersectionality. An analysis of indicators included here by racial-ethnic, gender, and country of origin is possible using the CPS and will be explored in future research.

Figure 15: UF prime-age transitions by racial-ethnic group

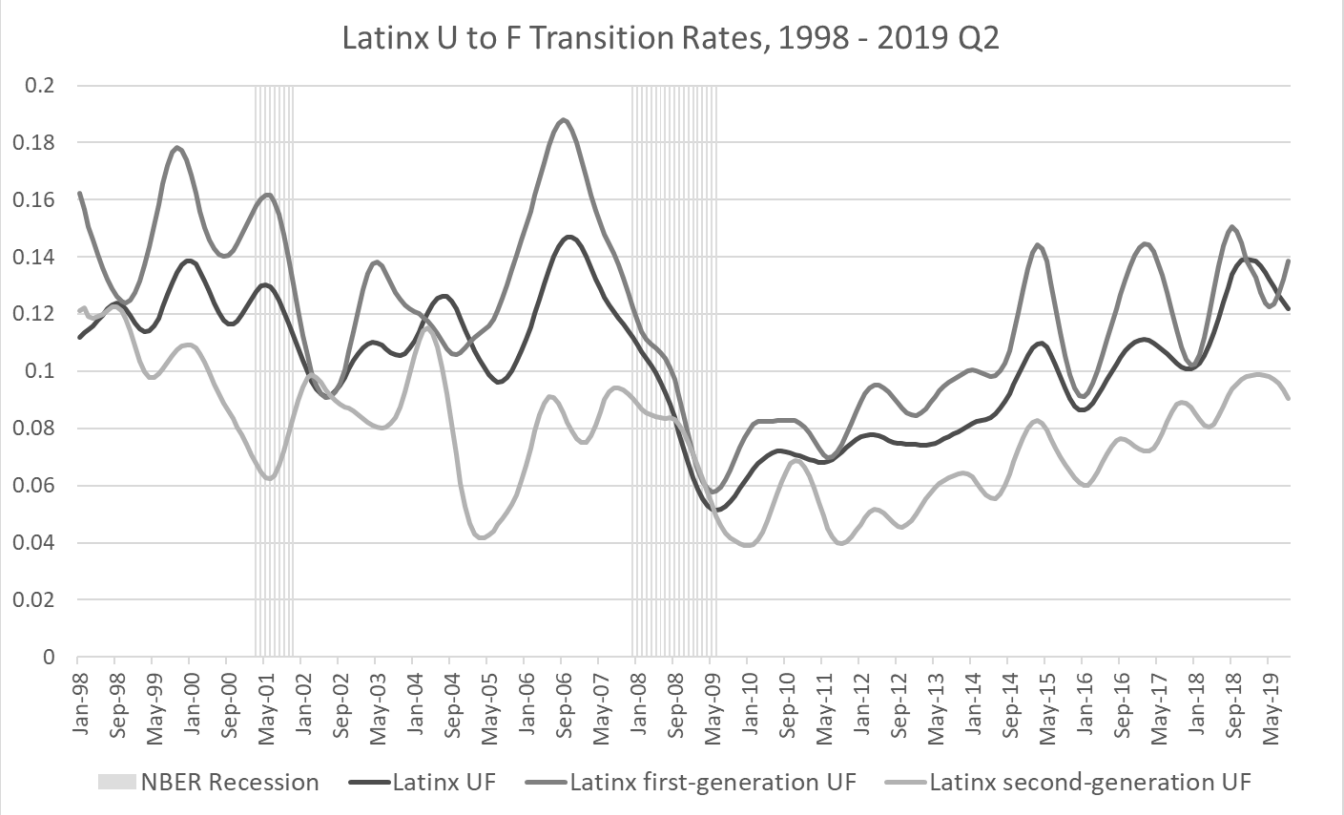


Transition rates for prime-age Latinxs from official unemployment into full-time employment are most regularly the highest of any of our demographic groups, peaking at UF rate of 18.4 in December of 2006. However, this was followed by the greatest magnitude downturn in UF transitions, reaching 5.6 in June of 2009. This was by far the largest fluctuation of any other racial-ethnic group presented here. Likely due to the role of housing in the economic downturn and the segmentation of Latinxs, predominantly males, into the construction industry we catch a notable peak in U to F transitions leading up to the Great Recession. Latinxs are concentrated in construction employment, 30.7% of construction sector employment is composed of Latinxs, up from 24% in

2011 (author's calculations of IPUMS-CPS microdata: Buckner, 2016). According to conventional human capital measures, Latinxs, particularly first-generation Latinxs, would be likely to have higher rates of official unemployment compared to both white and black workers with similar characteristics. However, we see in **Figure 17** below that first-generation Latinxs, those born outside of the U.S. including citizens and non-citizens, have lower official unemployment rates than all Latinxs and second-generation Latinxs[13]. Second-generation Latinx face the highest rates of official unemployment in the period between 1998 – 2019, and the lowest rates of transitioning from U to F since 1998 of the Latinx groups presented here. Recall that the Latinx UMI rate in **Figure 5** above showed that Latinxs faced rates of un- and under-employment as high as black workers during the onset of the Great Recession. All the while Latinx saw the highest rates of transitions into full-time employment (**Figure 15**). Related to the discussion of involuntary part-time employment in the previous section, it is clear that Latinxs moved into involuntary part-time employment in significant numbers following the 2007-2009 recession (see Appendix 4).

In **Figure 16** we see that first-generation Latinxs leave official unemployment for full-time employment at higher rates than the aggregate Latinx analytical category and double the rate for second-generation Latinxs during the mid-2000s expansion. First-generation Latinxs saw a greater decline in UF transition rates than prime-age Latinxs. The steep decline in second-generation UF transitions during the mid-2000s 'expansion' will be explored in future research.

Figure 16: UF transitions by Latinx group, age 16 and over



Due to limitations of the method used to generate transition rates we are unable to present UF transition rates for first and second generation Latinxs by race or gender classification. However, we are able to construct the U-3 rates in **Figures 17-19**, which provide a picture of the relative position of first-generation, second-generation, male (prime-age), female (prime-age), black, and white Latinxs. Black Latinxs (age 16 and over) see the highest rates of official unemployment, reaching a peak of 19% during the 2007-2009 recession. The black Latinx U-3

[13] We define second-generation Latinxs as those with at least one parent born outside of the U.S.

rate did not reach pre-recession levels until August 2017. Prime-age female Latinxs have a lower level of labor force participation, traditionally defined, and consistently have a lower U-3 than male Latinxs. The prime-age female Latinx U-3 peaked just above 6% during the 2007-2009 recession, nearly half that of prime-age male Latinxs.

Figure 17: U-3 comparison for first-generation Latinx, second-generation Latinx, and Latinx (age 16 and over)

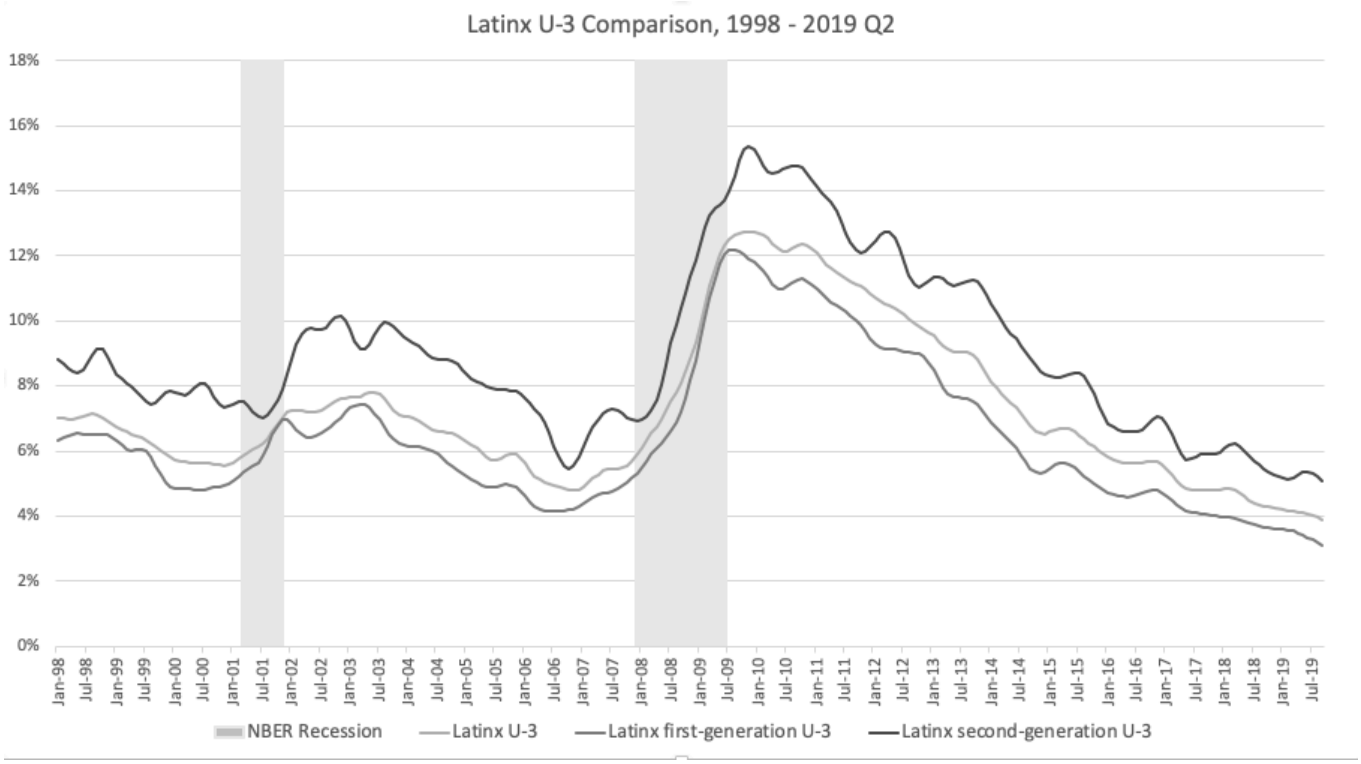


Figure 18: U-3 comparison for prime-age male and female Latinxs (age 16 and over)

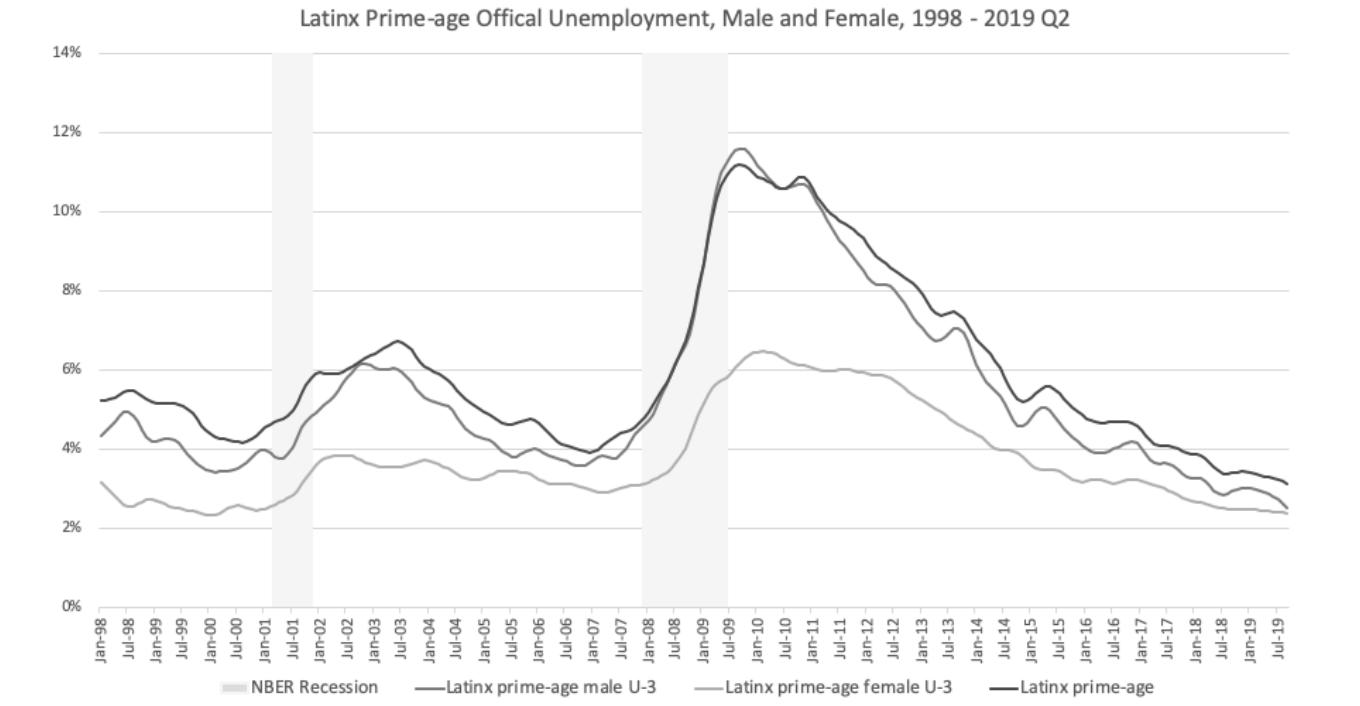
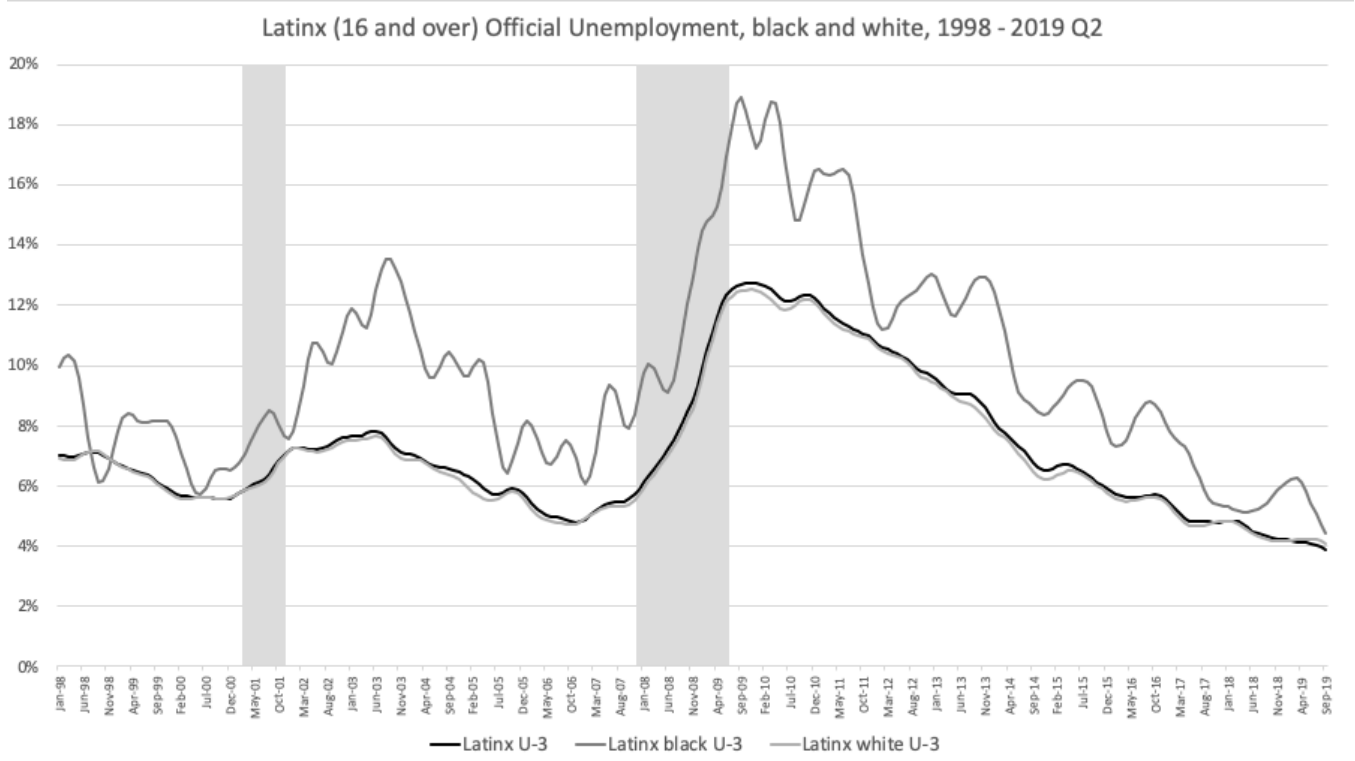


Figure 19: U-3 comparison for black and white Latinxs (age 16 and over)



Conclusion

It is important to recall the failures of the New Deal to equitably support non-white residents of the U.S (Forstater, 2012; Murray and Forstater, 2017). The GND and FJG aims to improve the lived environment of a large percentage of U.S. residents. If improvement is perceived to be benefiting the undeserving more than the dominant racial-ethnic groups (in the context of the U.S., white men, and to a lesser extent white women), political support from the dominant groups will weaken.

The provisioning of public goods is a political exercise. Dominant groups will have the political power to steer the allocation of public goods and secure an unfairly large share (Darity et al., 2017). If the dominant group is feeling less than altruistic towards subordinate groups or feels that subordinate groups receive more access to the publicly provided good than they deserve, the dominant group may withdraw their support for the expansion of public goods, advocate for austerity and the reduction of public goods, or lobby to change how public goods are provisioned. If public goods are allocated in a way that upsets the racial-ethnic status quo, the dominant group will react by safeguarding the "color-line." The taxpayer myth is used to justify hoarding public goods (Walsh, 2018). Post-Keynesian Institutionalist scholars and stratification economists recognize the foolishness and the selfishness of this rationale.

Administrators of a FJG may perpetuate existing patterns of racial steering and occupations (Forstater, 2012). Whites disproportionately occupy supervisory roles (Vijaya, 2015). Blacks and Latinxs are overrepresented in services, a sector with predominantly low-wages and often part-time employment. Policymakers must be mindful of these dynamics. It is certainly prudent to employ FJG participants in occupations that they are familiar with and in which they may have developed skills in the private market, but the program must not reinforce the racial steering that is present in the private sector. A standardized review process, skills development, accessible movement between sectors and occupations, and a clear pathway to supervisory roles must be well thought out and included.

If non-profit organizations are contracted to implement projects, as some advocates for a federal jobs guarantee have argued, their relationship with the communities they serve must be considered. There are far too many "saviors" within the non-profit world who do not live in the communities they serve. A recent survey of non-profit leadership found that 87% of all executive directors or presidents were white (The State of Diversity in Nonprofit and Foundation Leadership, 2015). Adoration at their cocktail parties and accolades for working with "The Poors" are their motivation for working with underserved communities; not the material improvement of those communities (Heckler, 2019). Employing these parties would reinforce and strengthen their relative status over subordinate racial and ethnic groups and result in substandard policy implementation.

Stratification economics recognizes the importance of last place aversion. One may be poor, uneducated, of failing health, and without prospects for upward mobility but at least they are not one of those people. Lifting the floor will not threaten the income or material well-being of anyone but it will close the relative space between dominant and subordinate racial and ethnic groups. Dominant groups will resist this as ardently as they resisted the passage of minimum wage laws, civil rights legislation, and the abolition of chattel slavery. Stratification economists, post-Keynesian scholars, and policymakers who advocate for a Green New Deal and full employment policies should be ready for this and recognize it as evidence that they are pursuing just measures.

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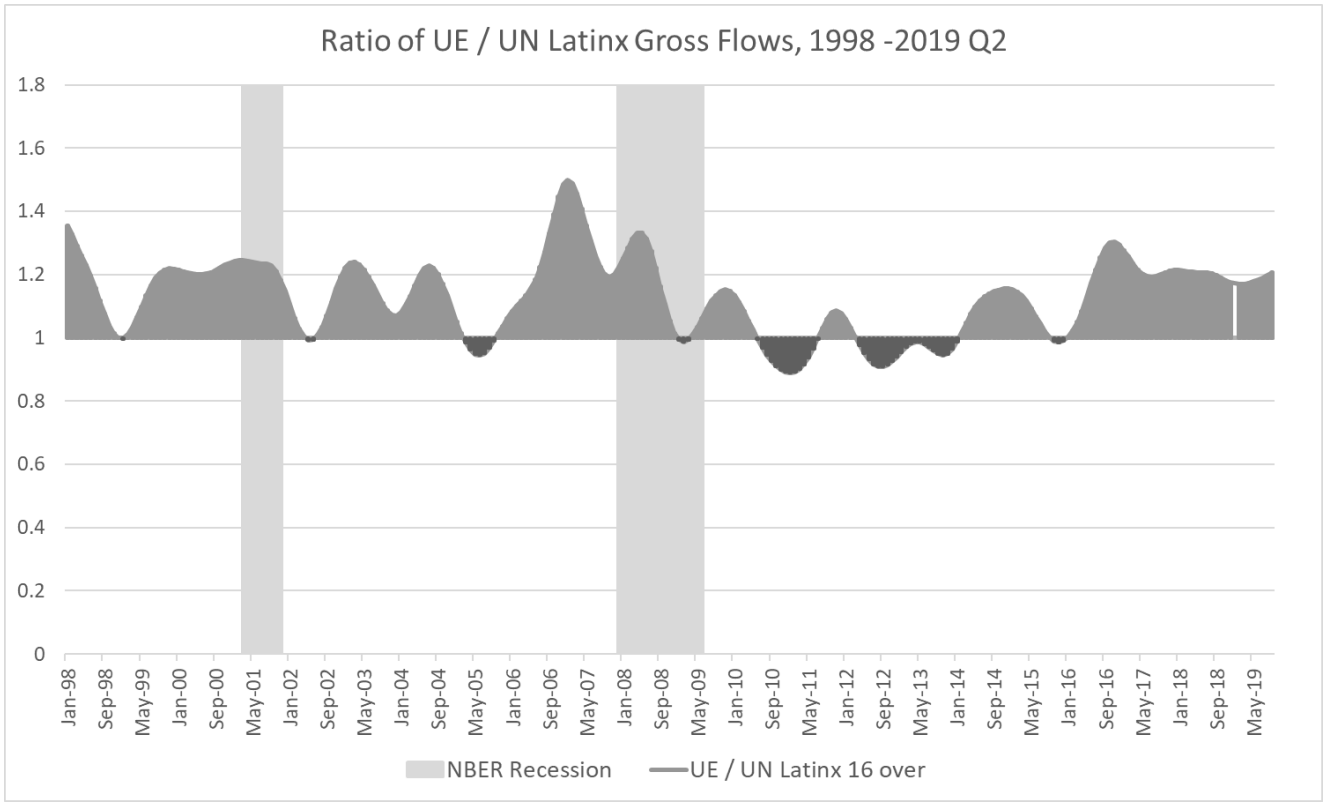
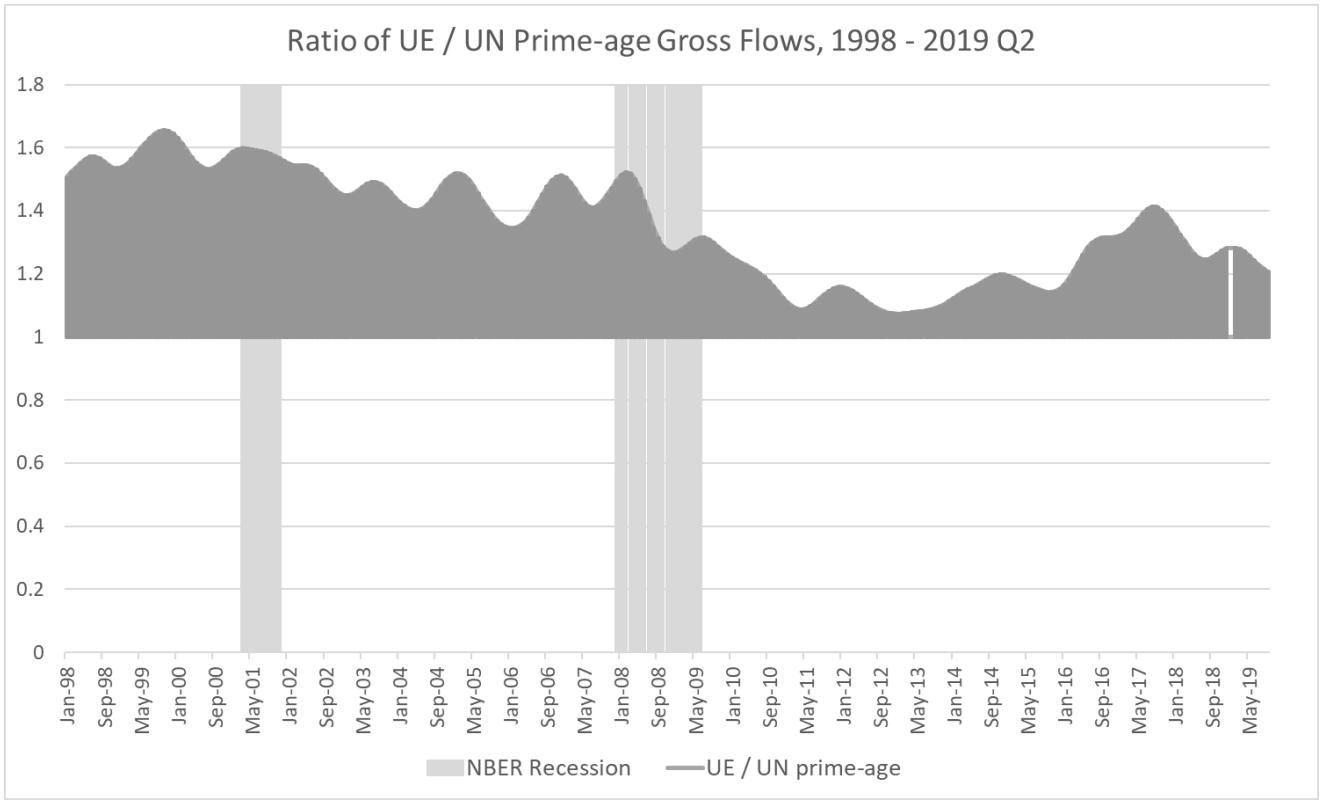
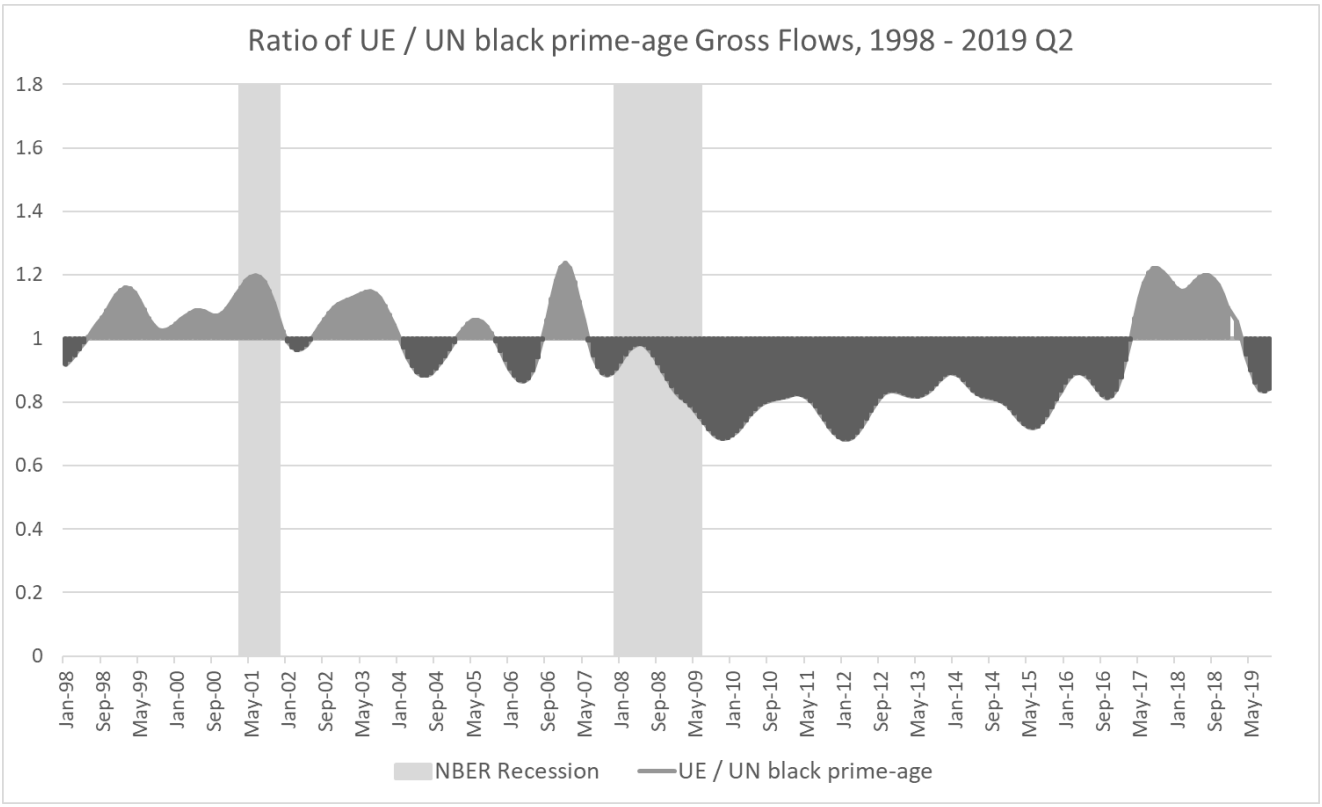
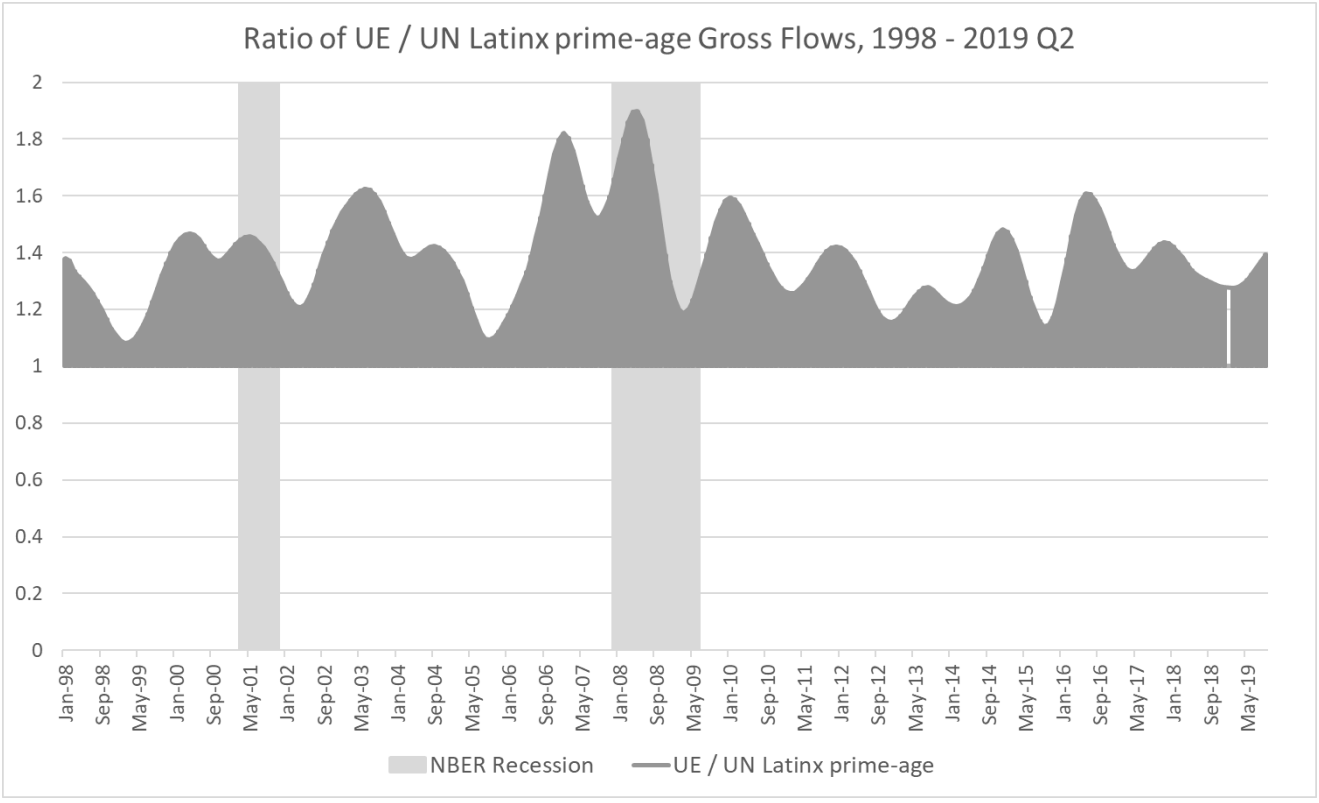
Appendix 1: UE/UN Gross Flows, 1998 – 2019 Q2

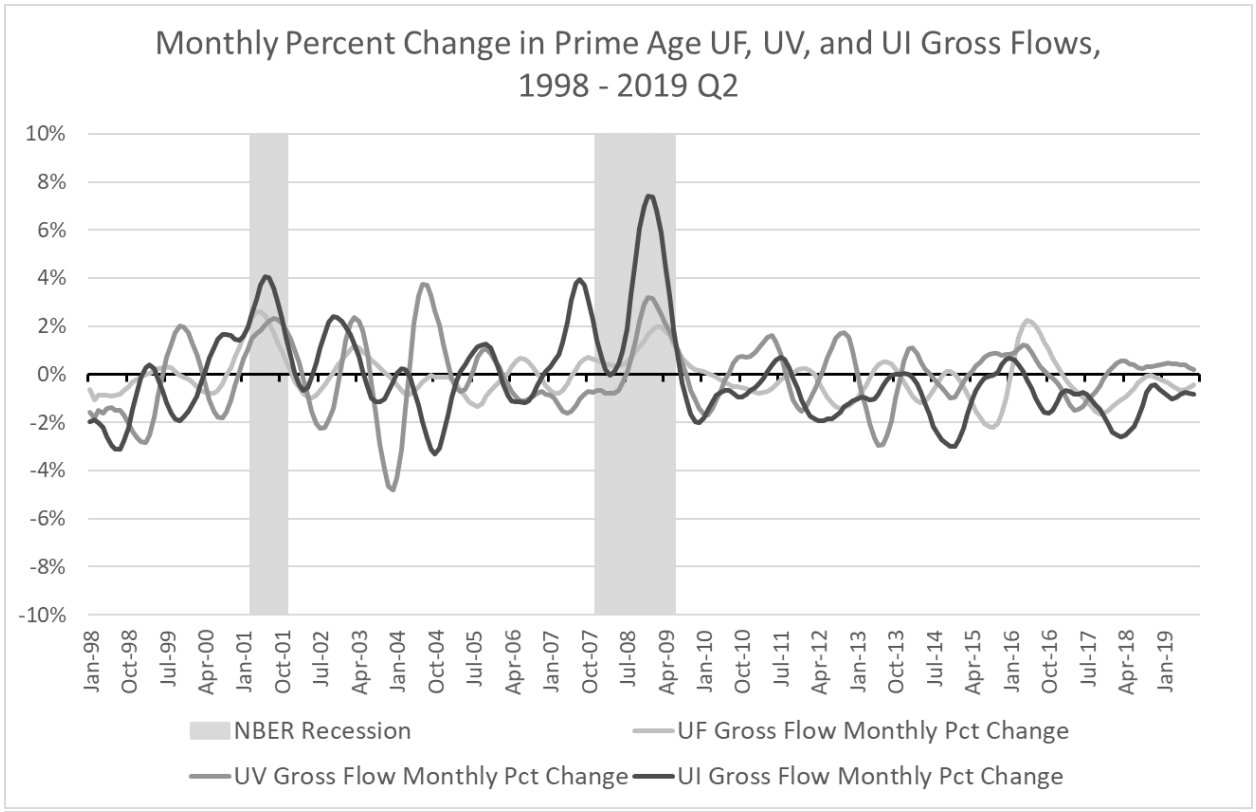


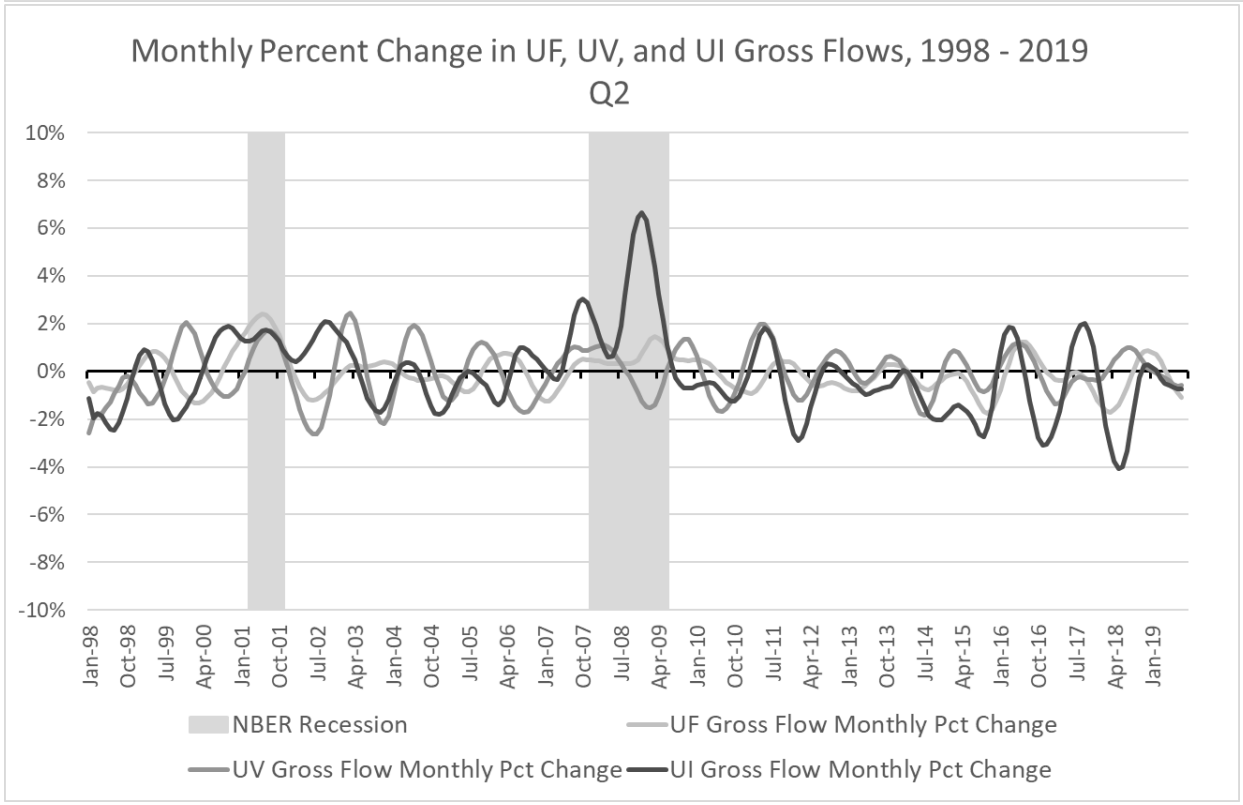


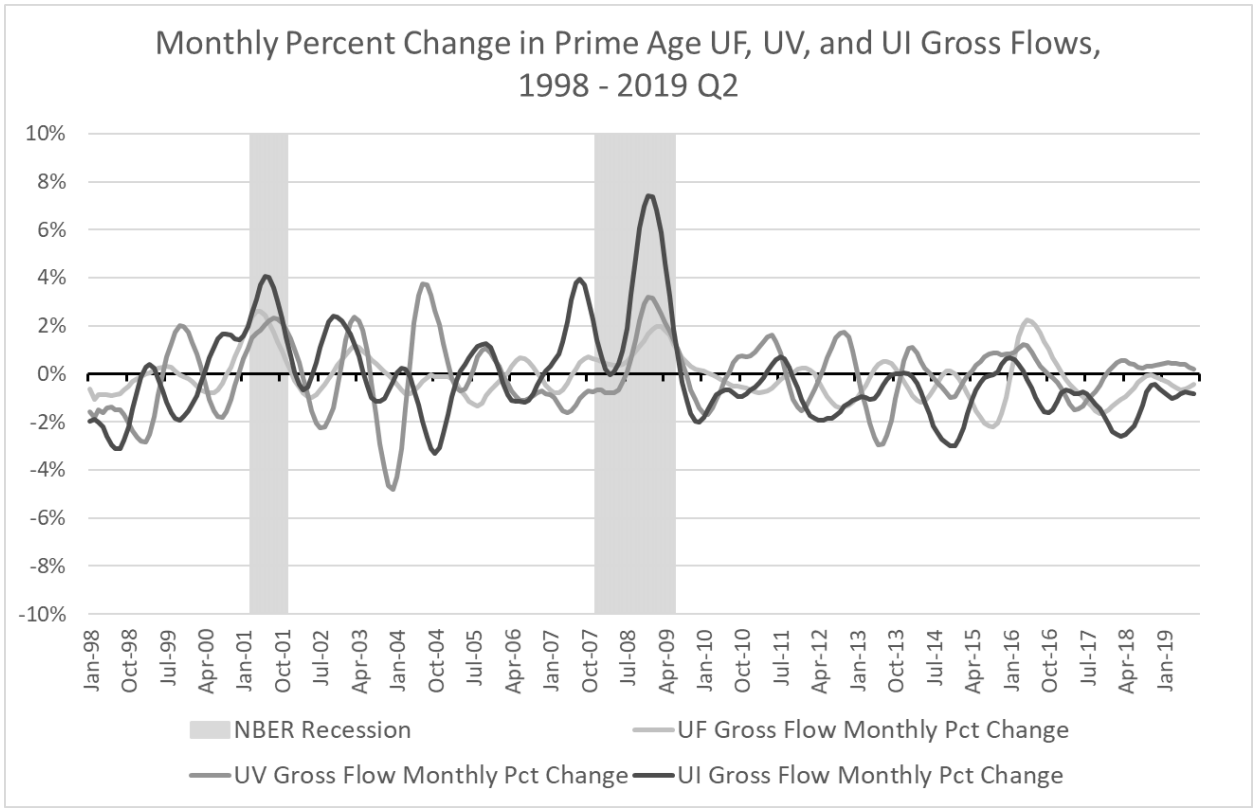

Ratio of UE / UN black prime-age Gross Flows, 1998 - 2019 Q2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan-98
Sep-98
May-99
Jan-00
Sep-00
May-01
Jan-02
Sep-02
May-03
Jan-04
Sep-04
May-05
Jan-06
Sep-06
May-07
Jan-08
Sep-08
May-09
Jan-10
Sep-10
May-11
Jan-12
Sep-12
May-13
Jan-14
Sep-14
May-15
Jan-16
Sep-16
May-17
Jan-18
Sep-18
May-19
NBER Recession
UE / UN black prime-age

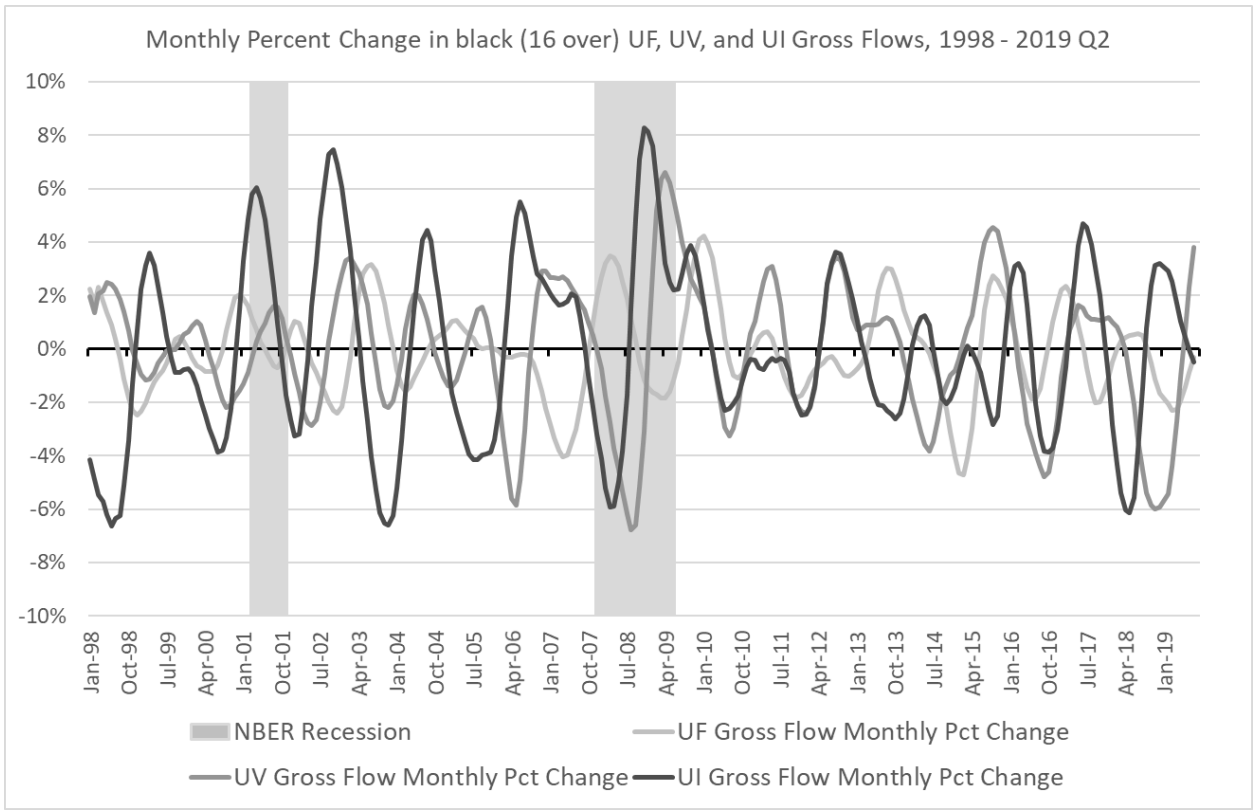

Ratio of UE / UN Latinx prime-age Gross Flows, 1998 - 2019 Q2
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan-98
Sep-98
May-99
Jan-00
Sep-00
May-01
Jan-02
Sep-02
May-03
Jan-04
Sep-04
May-05
Jan-06
Sep-06
May-07
Jan-08
Sep-08
May-09
Jan-10
Sep-10
May-11
Jan-12
Sep-12
May-13
Jan-14
Sep-14
May-15
Jan-16
Sep-16
May-17
Jan-18
Sep-18
May-19
NBER Recession
UE / UN Latinx prime-age

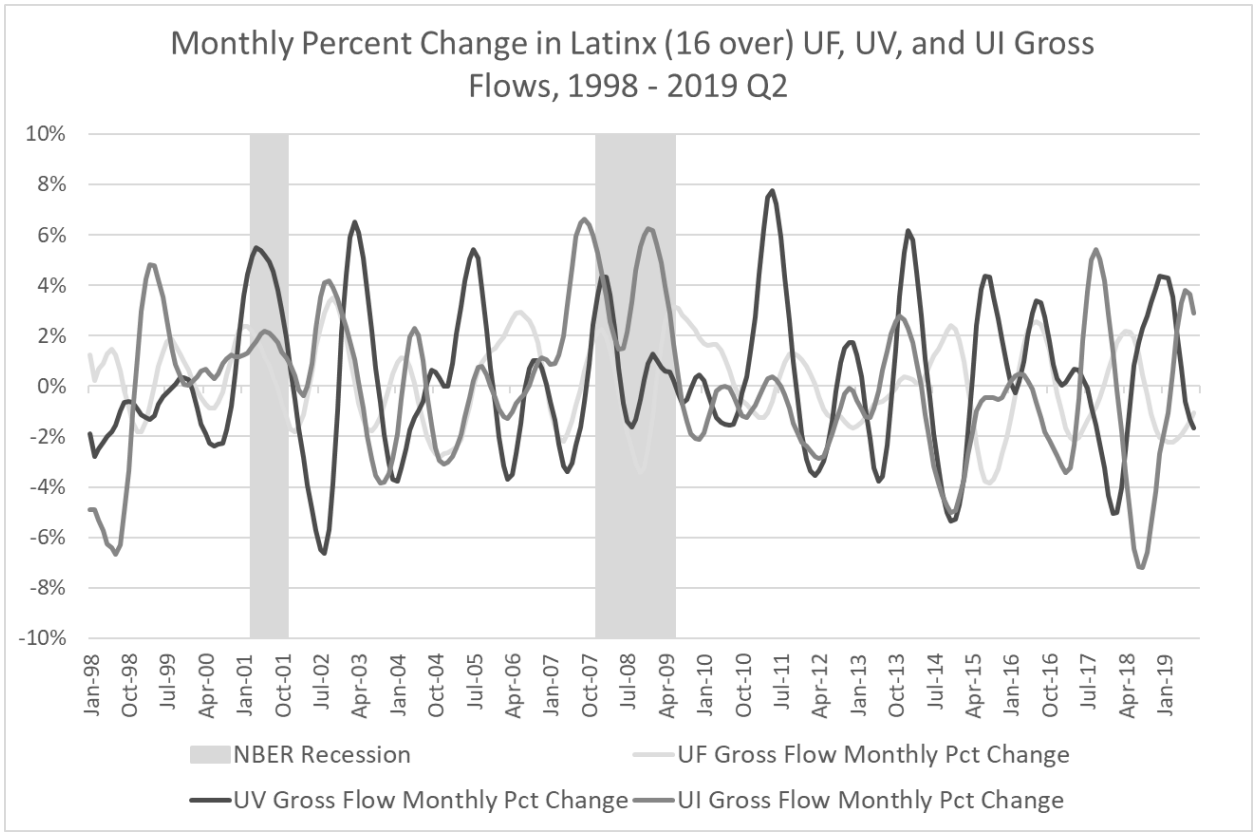
Appendix 2: Monthly Percent Change in UE / UN Gross Flows, 1998 – 2019 Q2

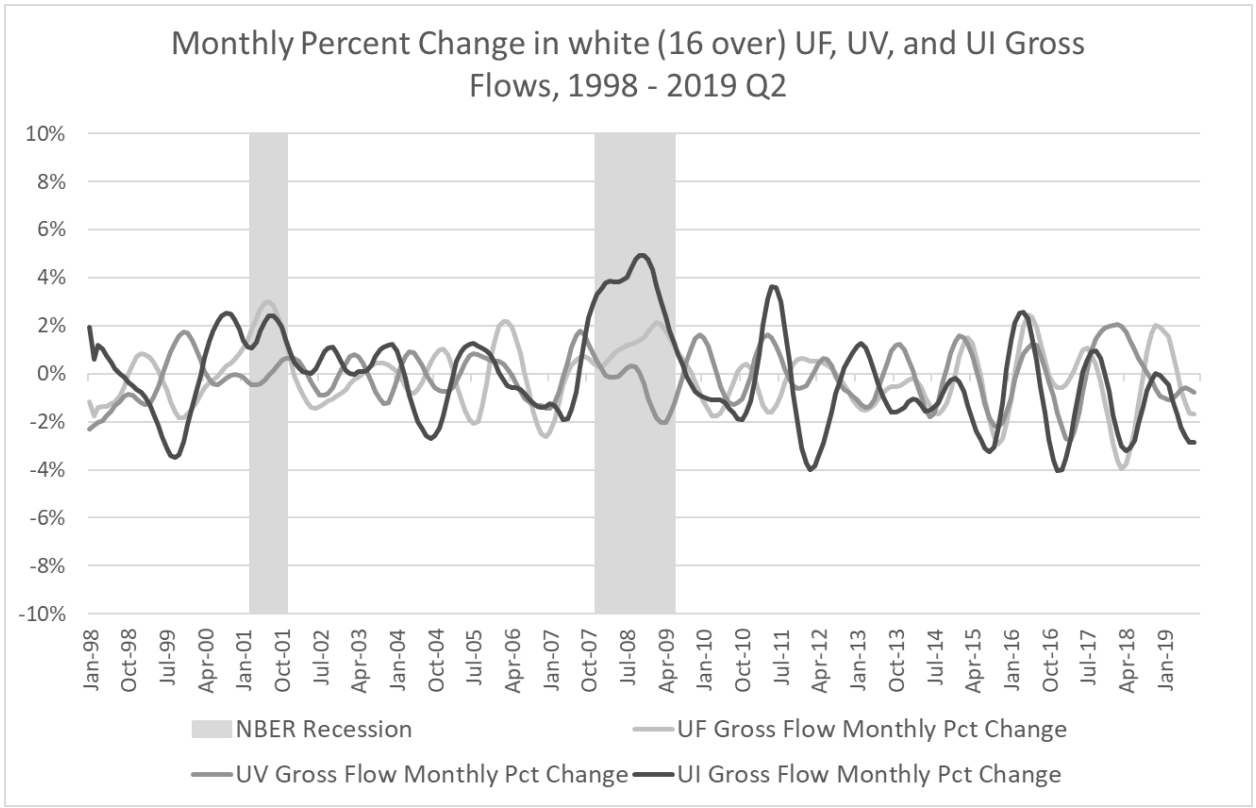





Monthly Percent Change in Prime Age UF, UV, and UI Gross Flows, 1998 - 2019 Q2
10%
8%
6%
4%
2%
0%
-2%
-4%
-6%
-8%
-10%
Jan-98
Oct-98
Jul-99
Apr-00
Jan-01
Oct-01
Jul-02
Apr-03
Jan-04
Oct-04
Jul-05
Apr-06
Jan-07
Oct-07
Jul-08
Apr-09
Jan-10
Oct-10
Jul-11
Apr-12
Jan-13
Oct-13
Jul-14
Apr-15
Jan-16
Oct-16
Jul-17
Apr-18
Jan-19
NBER Recession
UF Gross Flow Monthly Pct Change
UV Gross Flow Monthly Pct Change
UI Gross Flow Monthly Pct Change


Monthly Percent Change in black (16 over) UF, UV, and UI Gross Flows, 1998 - 2019 Q2
10%
8%
6%
4%
2%
0%
-2%
-4%
-6%
-8%
-10%
Jan-98
Oct-98
Jul-99
Apr-00
Jan-01
Oct-01
Jul-02
Apr-03
Jan-04
Oct-04
Jul-05
Apr-06
Jan-07
Oct-07
Jul-08
Apr-09
Jan-10
Oct-10
Jul-11
Apr-12
Jan-13
Oct-13
Jul-14
Apr-15
Jan-16
Oct-16
Jul-17
Apr-18
Jan-19
NBER Recession
UF Gross Flow Monthly Pct Change
UV Gross Flow Monthly Pct Change
UI Gross Flow Monthly Pct Change


Monthly Percent Change in Latinx (16 over) UF, UV, and UI Gross Flows, 1998 - 2019 Q2
10%
8%
6%
4%
2%
0%
-2%
-4%
-6%
-8%
-10%
Jan-98
Oct-98
Jul-99
Apr-00
Jan-01
Oct-01
Jul-02
Apr-03
Jan-04
Oct-04
Jul-05
Apr-06
Jan-07
Oct-07
Jul-08
Apr-09
Jan-10
Oct-10
Jul-11
Apr-12
Jan-13
Oct-13
Jul-14
Apr-15
Jan-16
Oct-16
Jul-17
Apr-18
Jan-19
NBER Recession
UF Gross Flow Monthly Pct Change
UV Gross Flow Monthly Pct Change
UI Gross Flow Monthly Pct Change


Monthly Percent Change in white (16 over) UF, UV, and UI Gross Flows, 1998 - 2019 Q2
10%
8%
6%
4%
2%
0%
-2%
-4%
-6%
-8%
-10%
Jan-98
Oct-98
Jul-99
Apr-00
Jan-01
Oct-01
Jul-02
Apr-03
Jan-04
Oct-04
Jul-05
Apr-06
Jan-07
Oct-07
Jul-08
Apr-09
Jan-10
Oct-10
Jul-11
Apr-12
Jan-13
Oct-13
Jul-14
Apr-15
Jan-16
Oct-16
Jul-17
Apr-18
Jan-19
NBER Recession
UF Gross Flow Monthly Pct Change
UV Gross Flow Monthly Pct Change
UI Gross Flow Monthly Pct Change

Appendix 3: U to F transitions over the business cycle

The *U → F* Transition Rate Cycle (De*NU*Nified) – All 16 and over

Period	*U → F Peak*	*U → F Trough*	*Range*	*Length*
2001 Recession Downturn	12.6 (Sept., 1999)	8.7 (May, 2003)	- 3.9	3 years and 8 months
Mid-2000s Expansion	11.4 (Aug., 2006)	8.7 (May, 2003)	+ 2.7	3 years and 3 months
2007-09 Recession Downturn	11.4 (Aug., 2006)	5.5 (Aug., 2009)	- 5.9	3 years
Post-2009 Expansion*	11 (Apr., 2019)	5.5 (Aug., 2009)	+ 5.5*	9 years and 7 months*

* The post-2009 expansion is potentially ongoing. The peak value of 11 is based on the latest available data as of this writing, and therefore may not be the peak of the post-2009 expansion. If not, the length of the expansion will likely exceed the 9 years and 7 months listed in this table.

The *U → F* Transition Rate Cycle (De*NU*Nified) – All Prime-age

Period	*U → F Peak*	*U → F Trough*	*Range*	*Length*
2001 Recession Downturn	15 (Oct., 1999)	10.1 (March, 2003)	- 4.9	3 years and 5 months
Mid-2000s Expansion	12.9 (Nov., 2006)	10.1 (May, 2003)	+ 2.8	3 years and 8 months
2007-09 Recession Downturn	12.9 (Nov., 2006)	6.2 (Aug, 2009)	- 6.7	2 years and 8 months
Post-2009 Expansion*	12.7 (Apr, 2019)*	6.2 (Aug, 2009)	+ 6.5*	9 years and 7 months*

* The post-2009 expansion is ongoing. The peak value of 12.7 is based on the latest available data as of this writing, and therefore may not be the peak of the post-2009 expansion. If not, the length of the expansion will likely exceed the 9 years and 7 months listed in this table.

The *U → F* Transition Rate Cycle (De*NU*Nified) – black 16 and over

Period	*U → F Peak*	*U → F Trough*	*Range*	*Length*
2001 Recession Downturn	10.7 (Oct., 1998)	6.4 (May, 2003)	- 4.3	4 years and 6 months
Mid-2000s Expansion	9.9 (Oct., 2006)	6.4 (May, 2003)	+ 3.5	3 years and 5 months
2007-09 Recession Downturn	9.9 (Oct., 2006)	3.6 (Oct., 2009)	- 6.3	3 years and 1 months
Post-2009 Expansion*	7.9 (Apr, 2018)*	3.6 (Oct., 2009)	+ 4.3*	8 years and 6 months*

* The post-2009 expansion is ongoing. The peak value of 7.9 is based on the latest available data as of this writing, and therefore may not be the peak of the post-2009 expansion. If not, the length of the expansion will likely exceed the 8 years and 6 months listed in this table.

The *U* → *F* Transition Rate Cycle (De*NU*Nified) – black prime-age

Period	*U → F Peak*	*U → F Trough*	*Range*	*Length*
2001 Recession Downturn	12.8 (Sept., 1998)	7.0 (Nov., 2004)	- 5.8	6 years and 2 months
Mid-2000s Expansion	11.5 (Dec., 2006)	7.0 (Nov., 2004)	+ 4.5	2 years and 1 months
2007-09 Recession Downturn	11.5 (Dec., 2006)	4.1 (Sept., 2009)	- 7.4	2 years and 9 months
Post-2009 Expansion*	10.2 (July, 2017)*	4.1 (Sept., 2009)	+ 6.1*	7 years and 10 months*

* The post-2009 expansion is ongoing. The peak value of 10.2 is based on the latest available data as of this writing, and therefore may not be the peak of the post-2009 expansion.

The *U* → *F* Transition Rate Cycle (De*NU*Nified) – Latinx 16 and over

Period	*U → F Peak*	*U → F Trough*	*Range*	*Length*
2001 Recession Downturn	13.9 (Jan., 2000)	9.1 (June, 2002)	- 3.8	2 years and 5 months
Mid-2000s Expansion	14.7 (Nov., 2006)	9.1 (June, 2002)	+ 5.6	4 years and 5 months
2007-09 Recession Downturn	14.7 (Nov., 2006)	5.1 (June, 2009)	- 9.6	2 years and 7 months
Post-2009 Expansion*	13.9 (Dec., 2018)*	5.1 (June, 2009)	+ 8.8*	9 years and 6 months*

* The post-2009 expansion is ongoing. The peak value of 13.9 is based on the latest available data as of this writing, and therefore may not be the peak of the post-2009 expansion. If not, the length of the expansion will likely exceed the 9 years and 6 months listed in this table.

The *U* → *F* Transition Rate Cycle (De*NU*Nified) – Latinx prime-age

Period	*U → F Peak*	*U → F Trough*	*Range*	*Length*
2001 Recession Downturn	15.6 (Feb., 2000)	9.3 (June, 2002)	*- 6.3*	2 years and 4 months
Mid-2000s Expansion	18.4 (Dec., 2006)	9.3 (June, 2002)	+ 9.1	4 years and 6 months
2007-09 Recession Downturn	18.4 (Dec., 2006)	5.6 (June, 2009)	- 12.8	2 years and 6 months
Post-2009 Expansion*	14.8 (Sept., 2019)*	5.6 (June, 2009)	+ 9.2*	10 years and 3 months*

* The post-2009 expansion is ongoing. The peak value of 14.8 is based on the latest available data as of this writing, and therefore may not be the peak of the post-2009 expansion. If not, the length of the expansion will likely exceed the 10 years and 3 months listed in this table.

The *U → F* Transition Rate Cycle (De*NUN*ified) – white 16 and over

Period	*U → F Peak*	*U → F Trough*	*Range*	*Length*
2001 Recession Downturn	14.3 (July, 1999)	8.9 (April, 2003)	- 5.4	3 years and 9 months
Mid-2000s Expansion	11.9 (July, 2006)	8.9 (April, 2003)	+ *2.5*	3 years and 3 months
2007-09 Recession Downturn	11.9 (July, 2006)	6.0 (July, 2010)	- 5.9	2 years and 10 months
Post-2009 Expansion*	11.4 (Oct., 2017)*	6.0 (July, 2010)	+ 5.4*	7 years and 3 months*

* The post-2009 expansion is ongoing. The peak value of 11.4 is based on the latest available data as of this writing, and therefore may not be the peak of the post-2009 expansion.

The *U → F* Transition Rate Cycle (De*NUN*ified) – white prime-age

Period	*U → F Peak*	*U → F Trough*	*Range*	*Length*
2001 Recession Downturn	16.9 (June, 1999)	10.4 (March, 2003)	- 6.5	3 years and 9 months
Mid-2000s Expansion	13.2 (Aug., 2006)	10.4 (March, 2003)	+ 2.8	3 years and 5 months
2007-09 Recession Downturn	13.2 (Aug., 2006)	6.9 (Nov., 2009)	- 6.3	3 years and 3 months
Post-2009 Expansion*	13.0 (Apr, 2019)*	6.9 (Nov., 2009)	+ 6.1*	9 years and 5 months*

* The post-2009 expansion is ongoing. The peak value of 13.0 is based on the latest available data as of this writing and therefore may not be the peak of the post-2009 expansion. If not, the length of the expansion will likely exceed the 9 years and 5 months listed in this table.

Appendix 4: U, M, and I stocks for Latinxs (age 16 and over)