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Labor Markets in the US and Wisconsin: Current State and Long-run Trends

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1. Introduction

I survey the current state of labor markets in the United States and the state of Wisconsin. In recent weeks the labor market has become a primary focus of economic and policy discussions, with job openings soaring to record levels while employment gains have slowed. Overall, the labor market in Wisconsin is currently tighter than nationwide, with the state having seen larger drop in unemployment and a larger increase in job openings in recent months. Moreover, the data suggests that labor supply issues have held back employment gains, whether from elevated unemployment insurance benefits, increased childcare duties with disrupted schooling, or continuing heath concerns.

While most of the factors causing the acute labor supply disruptions will lessen by the fall, long-term trends suggest reduced labor supply well into the future. All of these trends are stronger in Wisconsin than the nation overall. The state has seen a stagnant labor force for more than a decade. Labor force participation rates have been trending down for decades, driven largely by the aging of the population. Moreover births have fallen sharply in recent years and school enrollments have declined, suggesting smaller cohorts entering the labor market in years to come. While the "homegrown" labor force is set to shrink in coming years, migration is not likely to add many workers either. In recent years Wisconsin has seen small net domestic outflows to other states and small net positive total inflows due to international immigration. This suggests that, barring major changes in state or federal policy, drawing in new workers is unlikely to be a significant source of labor force growth for the state in the near future.

In sum, while there is much current discussion of a "labor shortage" due to acute short-term problems, in the long term the state is likely to face a declining labor force for years to come, which may have more dramatic implications.

2. Current Labor Market Conditions

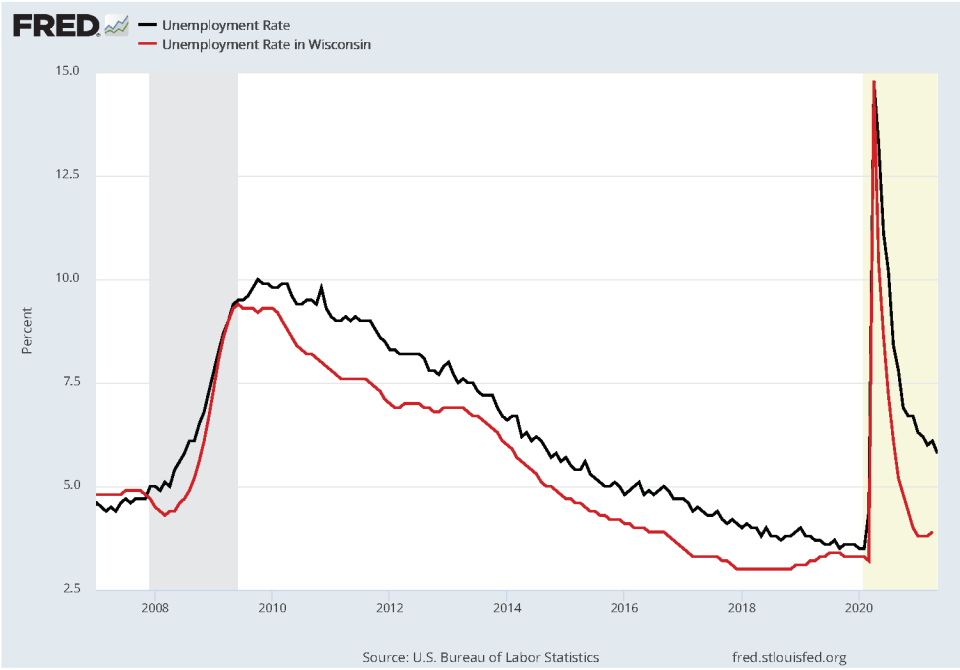

Figure 1: Unemployment rates in the United States and Wisconsin since 2007.

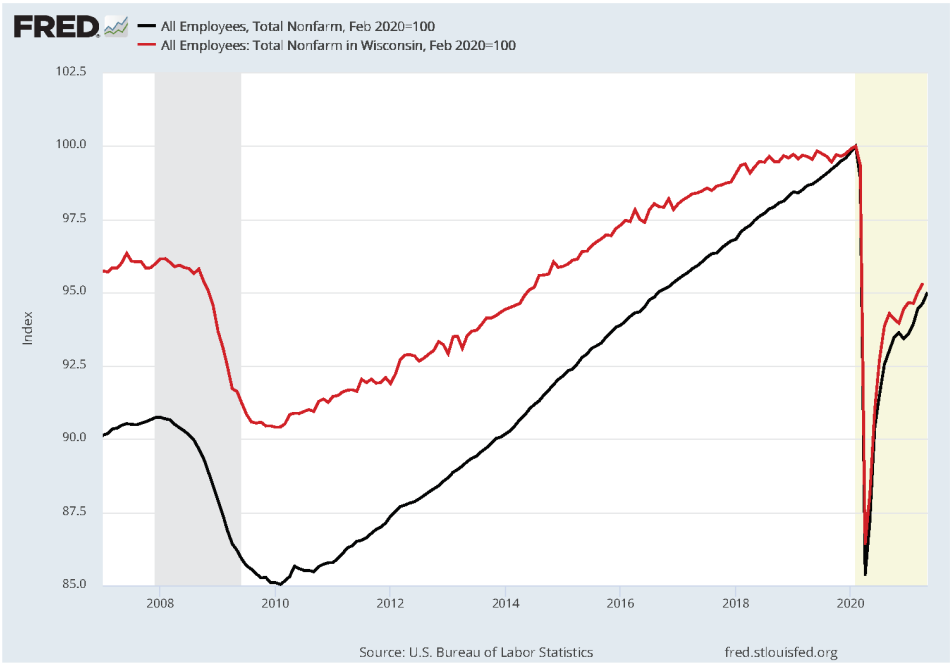

Figure 2: Employment on nonfarm payrolls in the United States and Wisconsin since 2007, indexed so February 2020=100.

Figures 1 and 2 show the most common aggregate indicators on the state of the labor market, the unemployment rate and employment on nonfarm payrolls. In both cases I include data back to 2007 to compare the COVID-19 recession and recovery with the business cycle, as well as to

highlight pre-pandemic conditions. Unemployment followed similar trends nationally and in the state, spiking during the pandemic from record lows, and sharply falling with reopening and recovery. Unemployment has fallen especially sharply in Wisconsin, with the most recent reading of 3.9% in May being only 0.6 percentage points above pre-pandemic levels, while the national unemployment rate was 5.8% in May, still 2.3 percentage points above pre-pandemic levels. Figure 2 shows that the recovery in employment has been strong but less complete, remaining roughly 5% below pre-pandemic levels both nationally and in the state. The figure also shows that throughout the long recovery from the 2008 recession, employment grew steadily both nationally and in the state. But the rate of employment growth nationally was roughly double the growth rate in Wisconsin. We will return to the factors driving the slower trend growth in Wisconsin below.

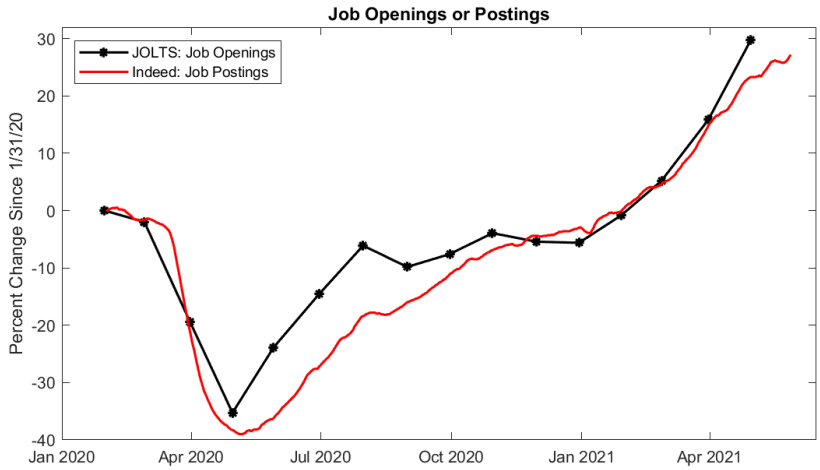

Figure 3: Job openings from JOLTS (monthly) and job postings from Indeed.com (daily), percentage change since January 31, 2020.

Figures 3 and 4 show that while the labor market recovery seems to have slowed in recent months, job openings have shot up to record levels. Figure 3 shows monthly data on job openings from the JOLTS program of the BLS, along with daily data on job posting from Indeed.com. Both series show that since the start of 2021 job openings have been increasing sharply, and are now around 30% above pre-pandemic levels. Figure 4 shows similar data on online job postings from Burning Glass, which shows similar overall trends, albeit with more volatility. In addition, this data provided by Opportunity Insights provides geographic decomposition, so we show Wisconsin as well as the US. Job openings have increased even more rapidly in the state, and in recent weeks are up roughly 50% from pre-pandemic levels.

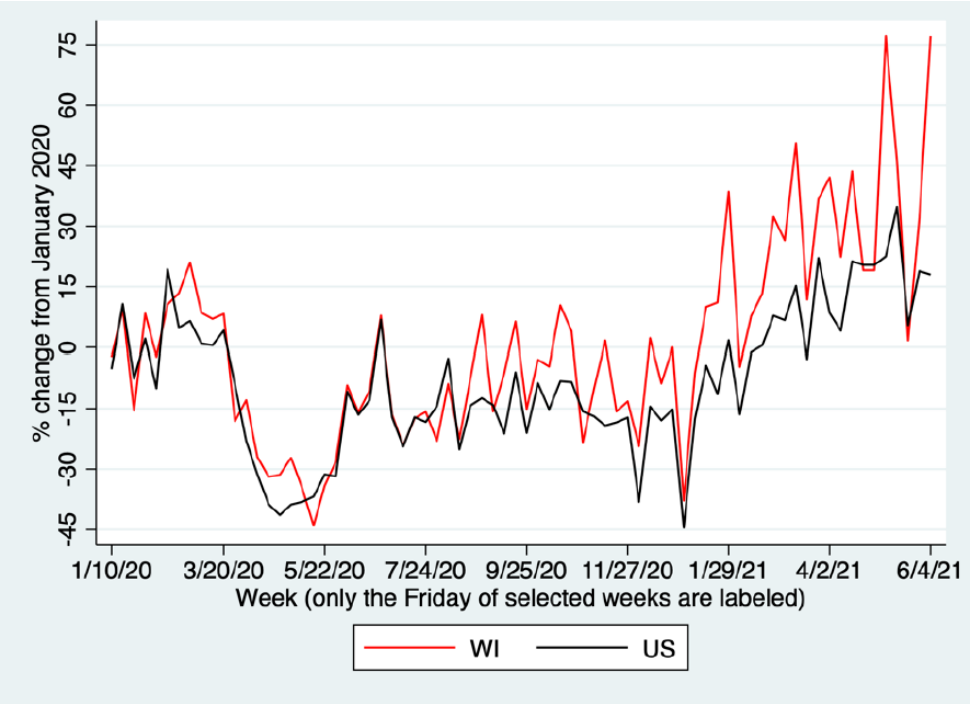

Figure 4: New online job postings in the United States and Wisconsin from Burning Glass, percentage change since January 2020.

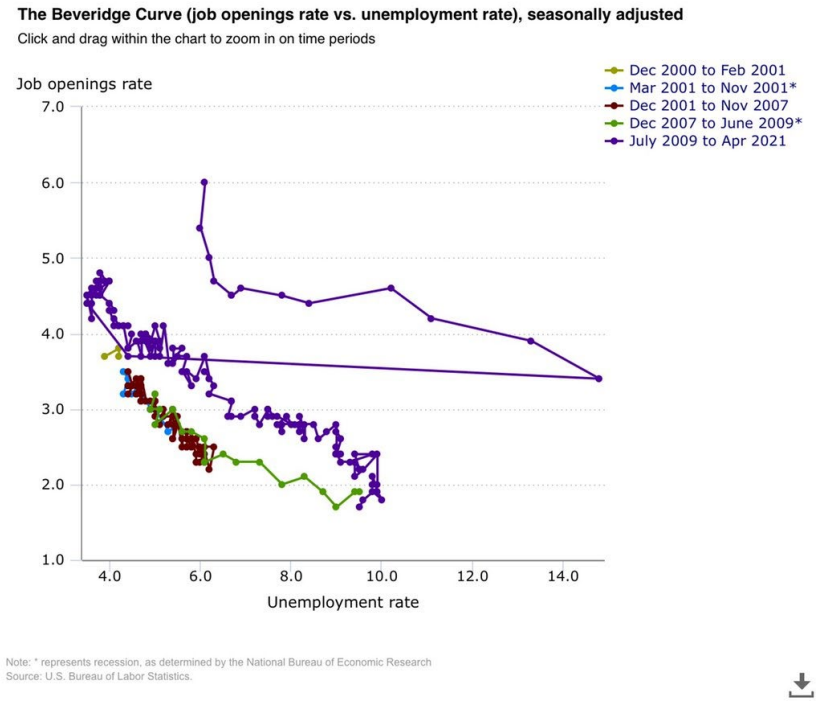

Figure 5: The Beveridge curve, showing the job opening rate versus the unemployment rate.

Putting these data together in Figure 5 shows just how anomalous the labor market in recent months has been. The figure shows the Beveridge curve, plotting the job opening rate versus the unemployment rate, which provides a useful summary measure of labor market tightness. The previous recessions and expansions are shown in lower left corner of the plot. During the 2008 recession the unemployment rate increased, moving to the right in the figure, while hiring fell and job openings declined, moving down in the figure. During 2009 the hiring rate increased but unemployment was relatively unchanged, showing a vertical shift in the curve. However as the recovery took hold, unemployment fell and vacancies increased, moving up and to the left in the figure. Notably, after the vertical shift, the slope of the two segments from 2000-2009 and 2009-2020 are nearly the same, suggesting that for the better part of two decades changes in unemployment were associated with the same magnitude of changes in job openings.

As we've seen, the early phase of the pandemic was characterized by a sharp increase in unemployment which shows up here as the large shift to the right in the figure. This was followed by the relatively rapid drop in unemployment during the reopening period. However since January 2021 the unemployment rate has been little changed while job openings have increased to record levels, hitting a 6.0% job rate in the most recent data. This shows up as a nearly vertical Beveridge curve, which is reflective of strong labor market demand but relatively little change in unemployment, suggesting reductions in labor supply relative to usual patterns.

While there is currently a sharp debate about the factors driving the labor supply reductions – whether enhanced unemployment benefits, limited schooling and child care options, or health concerns – the recent data suggests hiring and the economic recovery have been impacted. However most of these issues should be resolved by the fall if not sooner, with the expiration of enhanced unemployment benefits (although many states are ending them earlier) and the broad reopening of schools. But the long term trends pointing toward lower labor supply remain.

3. Long-term Labor Market Trends

While the COVID-19 pandemic has brought about widespread economic disruptions, the acute short-term strains are layered on top of adverse long-run labor supply trends. The issue of a "labor shortage" has moved to center stage with these short-term disruptions, but the underlying slowdown in labor supply has been building for decades. Moreover while the broad economic and demographic factors are similar across the nation, the trends toward lower labor supply growth are particularly strong in Wisconsin.

Figure 6 shows the size of labor force in the US and in Wisconsin since 2007, with the levels indexed so February 2020=100. The figure shows that the labor force in the state has been flat for more than a decade. While the national labor force grew by about 7% between 2010 and early 2020, the labor force in Wisconsin was roughly unchanged over this period. This is the main factor why employment growth, in Figure 2 above, has been slower in the state than nationally. In the years after the 2008 recession, employment growth in the state consisted of unemployed workers finding jobs and new entrants replacing retirees, but no net change in the overall pool of workers. The labor force in Wisconsin peaked in 2017, falling during 2018-2020 before recovering recently to its pre-pandemic level, which in turn is essentially the same as 2007.

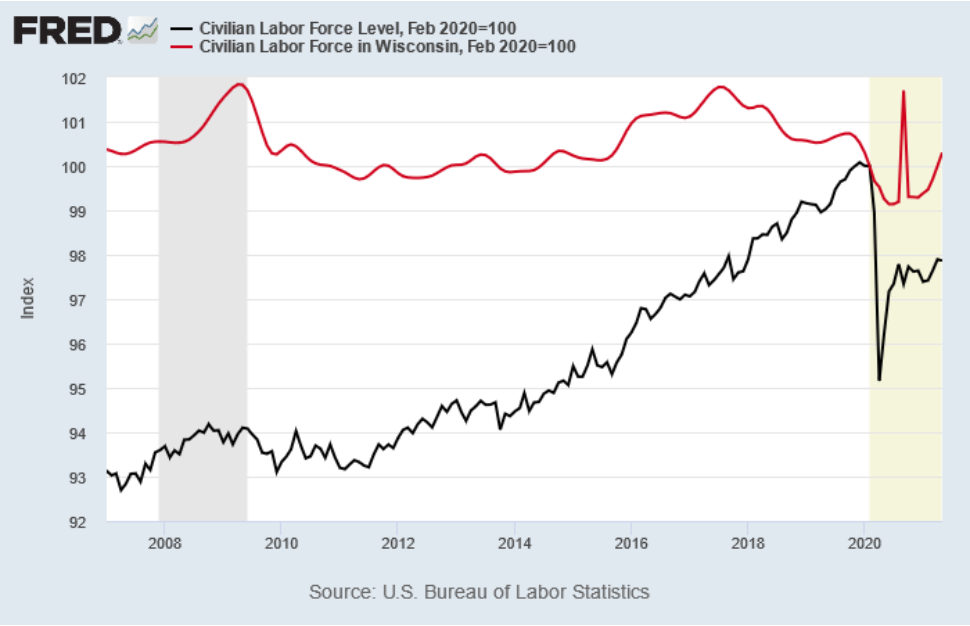

Figure 6: Civilian labor force in the United States and Wisconsin since 2007. Indexed so February 2020 = 100.

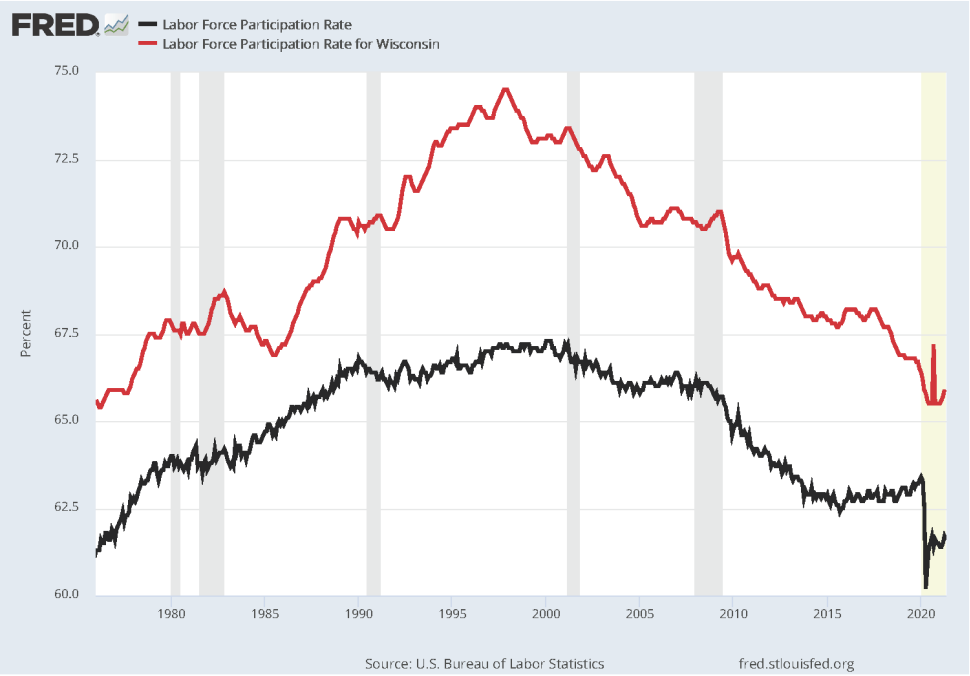

Figure 7: Labor force participation rate in the United States and Wisconsin since 1976.

Much of the discussion of the labor force shortage is about available workers, and for more than a decade the labor force in Wisconsin has been relatively flat. This means employers have been drawing from a pool of essentially fixed size. We now discuss some of the factors and demographics underlying the labor force trends. While the labor force has been stagnant, the population in the state has grown, albeit rather slowly. Combining these facts suggests that the

labor force participation rate, the share of the population in the labor force (either working or looking for a job) has fallen.

Figure 7 shows the long-run trends in labor force participation in the US and in Wisconsin since 1976. Several features are worth noting in this graph. First, the labor force participation rate has been higher in Wisconsin than nationally throughout, by an average of 4.8 percentage points. Second, and more importantly for our purposes, the broad trends are similar nationally and in the state, but the trends are more pronounced in Wisconsin. In particular, participation rates increased from 1976-1990 nationally, largely driven by the entry of more women in the labor market. Then from 1990-2008 national participation rates were relatively flat, before trending down in recent years. Interestingly, the long expansion after the 2008 recession saw a flattening and then a slight reversal of the downward trend, as the tighter labor market nationally drew more workers into the labor market. The COVID-19 recession brought a further sharp fall in participation. These trends were roughly similar in Wisconsin, but rather than plateauing in 1990, participation continued to increase until hitting a peak of 74.5% at the end of 1997. But since that time, the trend has been steadily downward, with the state not experiencing the reversal seen nationwide prior to the pandemic. Again, there was a sharp fall during the pandemic and minor recovery recently, until now the labor force participation rate stands at 66.1%, a full 8.4 percentage points down from its high from nearly 24 years ago.

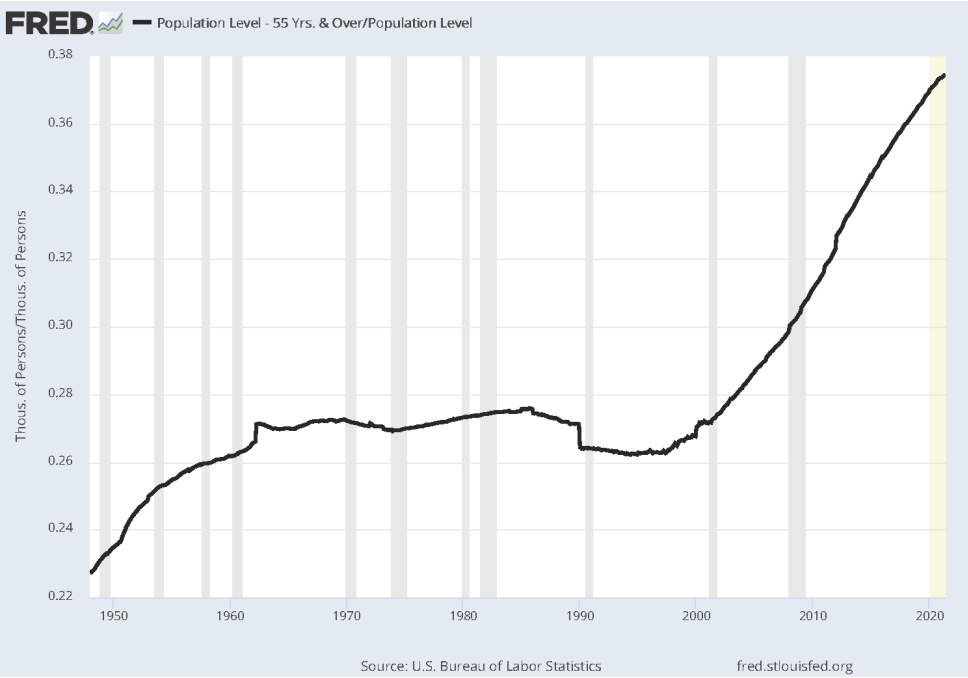

Figure 8: Share of the population 16 years old and over in the United States that is at least 55 years old.

Distribution of population, Census Bureau

	United States			Wisconsin		
	1999	2010	2019	1999	2010	2019
Under 20	28.7	26.9	24.9	28.8	26.4	24.3
20-44	37.0	33.6	33.1	36.2	32.2	31.5
45-54	13.1	14.5	12.4	13.3	15.3	12.3
55-64	8.6	11.9	12.9	8.6	12.4	14.1
65+	12.7	13.1	16.4	13.2	13.7	17.6
Median Age	35.5	37.2	38.5	36	38.5	39.9

Table 1: Age distribution of the population in the United States and Wisconsin.

The primary reason for the reduction in labor force participation rates has been the aging of the population. Figure 8 shows a simple summary nationally: the share of the population 16 and over that is 55 years or older. After remaining relatively flat from 1965-2000, this share has shot up dramatically, increasing by almost 12 percentage points to nearly 38% recently and still climbing. More detail on the changing age structure of the population in the US and Wisconsin is provided in Table 1, which reports the age distribution in 1999, 2010, and 2019 (the most recent available). The table makes clear that the population is aging both nationally and in the state, and the state is growing old at a faster rate. In particular the median age in Wisconsin was only half a year above the national average in 1999, but by 2019 the gap had roughly tripled to nearly a year and a half. Furthermore, the share of the population 55 and older in Wisconsin grew from 21.8% of the population in 1990 to 31.7% in 2019. As a larger share of the population hits retirement or near-retirement age, labor force participation will naturally fall.

Wisconsin is aging more rapidly than the nation as a whole, which suggests a continuing decline in the labor force as a share of the population. However other indicators suggest an even more acute problem in the future: that the labor force will decline absolutely, not just in relative terms. This means that even at full employment rates, the state could experience declining employment levels in the years to come. This could have profound implications for the structure and industry mix in the state economy, as well as for public finance in the state.

Figures 9 and 10 both show that in the coming years the entering cohort of workers is likely to shrink. Figure 9 reports births in Wisconsin, which have fallen almost every year consecutively since 2007, with a substantial drop in 2020. Overall, births in the state are down 17% since 2007. The lower number of births of course will take a while to show up in the labor force, but it is already being reflected in school enrollments. Figure 10 reports public school enrollments in the state for select years before 2008, along with complete data from 2008-2020. In addition, I report the projections from the National Center for Education Statistics for enrollments out to 2029. School enrollment was relatively flat from 2000-2013, but has fallen each year since. 2020 was clearly an outlier, with enrollment figures, which are based on attendance, down substantially due to the pandemic and remote schooling. But even abstracting from this outlier (the projected drop was much smaller), enrollments are expected to continue to fall for the rest of the decade.

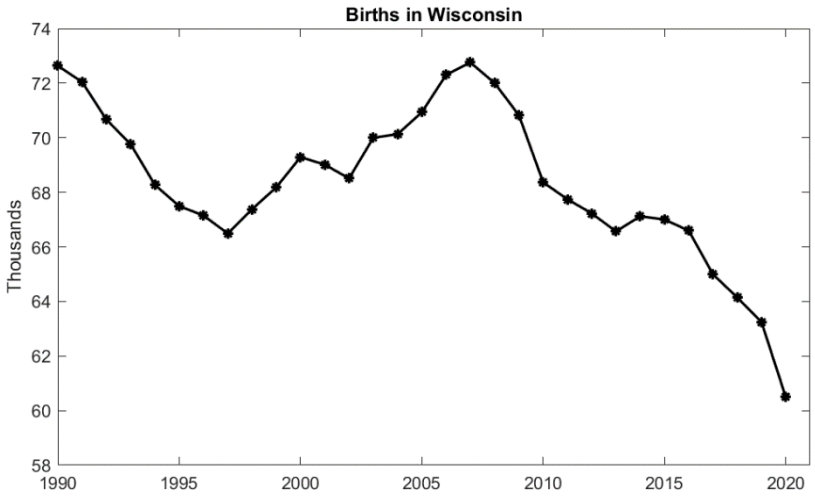

Figure 9: Births in the state of Wisconsin.

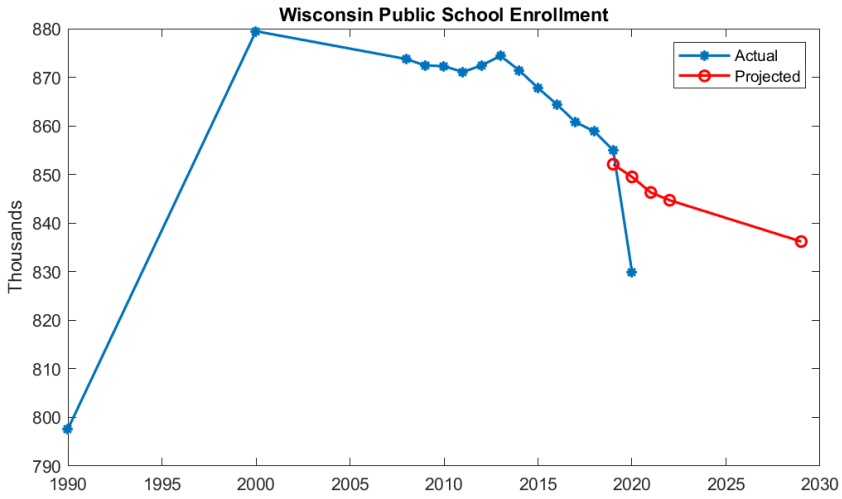

Figure 10: Wisconsin public school enrollment (through 2020) and projections from the NCES (2019-2029).

While these figures suggest that the "homegrown" labor force will likely be smaller in Wisconsin in the years to come, Figure 11 suggests that the state is also unlikely to see a substantial inflow of new workers due to migration. The left panel of the figure focuses on Wisconsin, showing the net population migration both from domestic sources (red line) -- that is, people from other states moving in minus Wisconsinites leaving for other states – and overall (black line), which includes net international flows. In total for the past decade there has been a small net outflow from the state, with net domestic outflows dampened by a small inflow of international immigrants. Net domestic outmigration increased from 2010-2015 before declining in recent years, and 2016-2019 saw small net total inflows. However what's most salient about these figures are the small scale of the flows: most years saw a net change of plus or minus 5,000 people. I include Illinois in the figure to illustrate the difference in scale with larger migration flows. Since 2014 an average of 108,812 people per year (on net) have moved from Illinois to other states, which

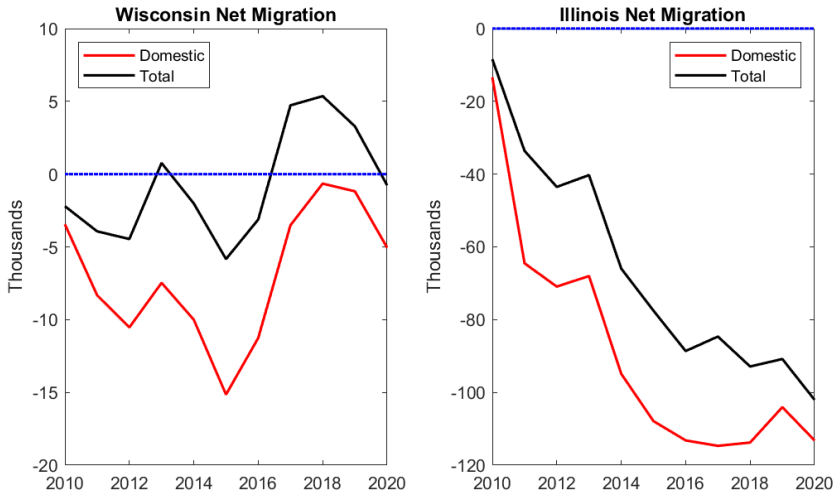

Figure 11: Net migration, both domestic (red line) and total (black line) in Wisconsin (left panel) and Illinois (right panel).

amounts to about 0.85% of population moving out of the state each year. By contrast, at the peak domestic outmigration in 2015, about 0.25% of the population of Wisconsin left the state, and in most years the share was much smaller. Thus, barring substantial changes which would draw in migrants from the US or internationally, migration is likely to be a minor contributor to labor force dynamics in Wisconsin in the years to come.