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The pig in the python: US decennial labor flows and economic opportunity, 1910–2040

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This analysis revisits the relative cohort size hypothesis proposed by demographer Richard Easterlin in the 1960s. Easterlin argued that the economic and social prospects of a generation are influenced by the size of the cohort relative to adjacent cohorts. He hypothesized that relative cohort size affects wages, employment, marriage, and fertility decisions. The theory fits the data well for the period from 1940 to 1980 but fails in later decades. I present a more nuanced view of the impact of demographic factors on worker competition through the lens of a measure of decennial labor-force flows. This approach allows consideration of the effects of retirement, female labor-force participation, and immigration on labor-market competition. I calculate these flows for the period from 1910 to 2040 and propose an index of employment competition. The results show that trends in labor-market competition are consistent with wage trends of young workers since 1940. Projections to 2040 show that we are on the verge of a radical reshaping of labor markets in which new workers will be in extremely short supply.

baby boom | cohort size | labor flows

Significance

The large size of the baby boom cohort depressed economic opportunities for that generation as it flooded the labor force in the 1970s. Contrary to the predictions of Richard Easterlin's relative cohort size hypothesis, however, there was no rebound of opportunities with the advent of smaller cohorts in the mid-1980s; incomes of young adults remained depressed until the 2010s. New measures of flows into and out of the labor force make it simple to assess the relative impact of retirement, female labor-force participation, and immigration in concert with the size of birth cohorts entering the labor force. The results suggest that the departure of baby boomers from the labor force will have profound implications for economic opportunities of new workers.

"New Census Trend: the Bulging Generation" announced the headline in the *New York Times* on November 5, 1971. The article explained that there was a bulge in the US population that resembled "what happens when a pig is eaten by a python." The newspaper illustrated the bulge with a graph of the age distribution in the shape of a python and noted that the baby boom age group "sticks out like the python's dinner" (Fig. 1*A*). All things being equal, "the bulge moves gradually along the length of the snake until it is fully digested" which "could cause continuing and considerable changes in American society for the next half century" (1). Three years later, the humorist Russell Baker again characterized the baby boom generation as a pig in a python, and imagined a country dominated by the cohort as it passed through the stages of life, until eventually "the diminished young population… would be increasingly hard-taxed to pay retirement benefits for the aging majority" (2).

Richard Easterlin (3, 6, 7) proposed that the baby boom resulted from an exceptionally favorable labor market for young adults in the postwar period. He attributed that strong labor market to a shortage of workers in a period of rapid growth. The shortage of workers in turn resulted mainly from small birth cohorts during the Depression. According to Easterlin's relative cohort size hypothesis, economic opportunity is inversely associated with the relative size of birth cohorts. The "lucky few" Depression era babies were in high demand after the war, so they received high wages, married early, and had lots of babies (8). Easterlin predicted that when the baby boom bulge reached working age in the 1970s, their economic prospects would diminish with the gusher of young workers entering the labor market.

By 1978, it appeared as if Easterlin's predictions were coming to pass. Incomes of young people rose spectacularly after World War II as the small Depression-era birth cohorts entered the job market, and the trend abruptly reversed in the early 1970s as the large baby boom cohort came of age. In his 1978 presidential address to the Population Association of America, Easterlin predicted that the recent decline in the wages of young men would reverse by 1984 as a smaller birth cohort entered the job market (3). Rising wages, Easterlin predicted, would bring a surge in marriages, a new baby boom, and a host of other salutary changes, including a drop in crime, a rise in college enrollment, and an increase in SAT scores.

Easterlin's key graph from that presentation (Fig. 1*B*) showed that relative cohort size of young men declined sharply from 1940 until the 1950s and then increased rapidly until about 1975. Easterlin measured relative cohort size as the number of males age 15 to 29 as a percentage of the number of males age 30 to 64. This represents the relative size of the age group entering the workforce compared to the rest of the working-age

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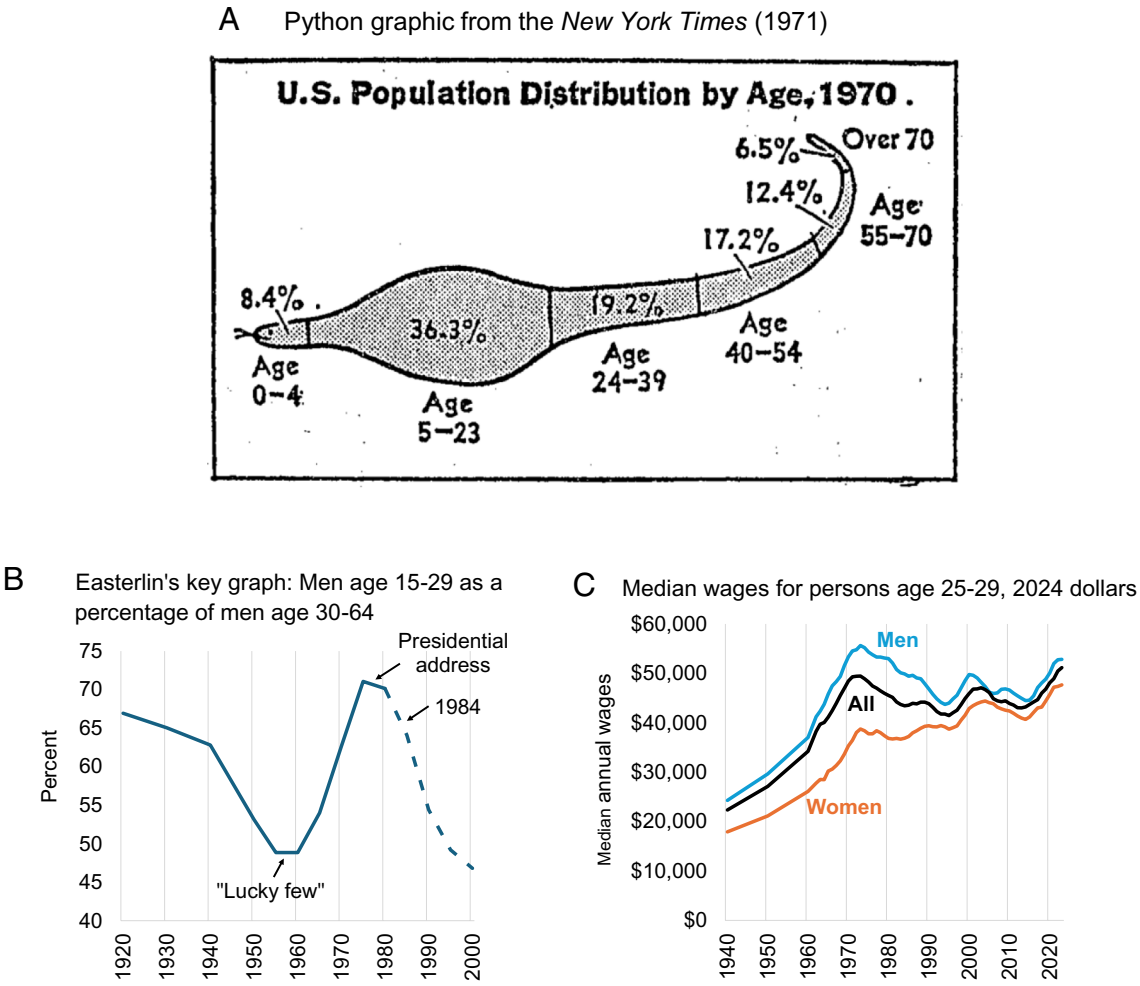

Fig. 1. The pig in the python. (*A*) Age distribution in the shape of a python, *New York Times* 1971. Used by permission. (*B*) Easterlin's key graph, showing men age 15 to 29 as a percentage of men aged 30 to 64. Easterlin (3) predicted that the incomes of young men would start going up by 1984 when the supply of young men started shrinking. (*C*) Median annual wage and salary income of full-time workers aged 25 to 29, 1940–2023, by sex, in 2024 dollars. Real incomes for young men declined until 2015. Data on real wages calculated from IPUMS (4, 5). Prices adjusted using CPI-U from 1939 to 1977 and R-CPI-U-RS from 1978 to the present.

population. The analysis focuses entirely on men. Easterlin argued that because of gender segregation of occupations, women did not significantly compete with men, and male economic opportunity was the primary determinant of household economic welfare ((3), p. 403).

Easterlin's predictions for 1984 were wrong. Not only did the real wages of young men fail to rise by 1984, but real wages continued to decline. After a significant uptick during the boom years of the 1990s, male wages resumed their decline after 2000, reaching a nadir in 2015 when real male wages were 25% lower than in 1973 (Fig. 1*C*). Young women fared better as sex discrimination diminished, but their real wages still stagnated; in 2014 real median wages for young women were virtually the same as they had been in 1973. The four-decade decline in the real wages of workers ages 25 to 29 coincided with a dramatic rise of inequality both within and between generations (9). In addition, contrary to Easterlin's prediction, the marriage rate plummeted and there was no new baby boom. SAT scores stagnated, and crime rates continued to rise until the early 1990s.

Easterlin's relative cohort size hypothesis has generated a large literature (10, 11). There is a broad consensus that cohort size provides a convincing explanation for the relative prosperity of the lucky few and for the size and duration of the postwar baby boom, but that cohort size fails to predict the economic fortunes of young adults after the early 1970s (10, 12, 13).

Decennial Labor-Force Flows

Measuring the Flows. Relative cohort size focuses on age distribution at a particular moment. At the time Easterlin proposed the relative cohort size measure, he was constrained by limited availability of data. There was no long-run series of microdata available, so he had to rely on tabulations available in printed census volumes. The IPUMS series of microdata allows a more nuanced view of labor-market competition faced by new workers by looking at net decennial flows of workers into and out of the labor force (4).

Net decennial flows are defined as the changes in the size of the labor force over a ten-year period. Flows may be subdivided by characteristics such as sex, age group, and nativity. I use ten years rather than shorter periods because of data constraints; for detailed analysis of labor-force flows, we need large microdata samples available only at ten-year intervals for most of the 20th century.

The competitiveness of labor markets is determined not only by the influx of new workers, but also by the departure of old ones. Easterlin (7) argued that retirement is relatively unimportant

because older and younger workers are at opposite ends of the career ladder and therefore do not directly compete. Although inexperienced entry-level workers may not compete directly for the jobs of retiring experienced workers, retirement creates opportunities for the next rung of skilled workers, and those opportunities eventually percolate down to the entry level. Among unskilled workers, retirements may create immediate openings for younger workers. In other cases—such as senior university faculty positions occupied by aging baby boomers—a single retirement may free up sufficient resources to hire two or three junior replacements.

The labor-force flows approach can account for the effects of retirement on economic opportunity. It also can accommodate two major structural changes in the job market of the second half of the twentieth century. First, from 1940 to 2000 there was a dramatic increase in female labor-force participation, especially among married women (14). Second, there was a large increase in the number of immigrant workers following the 1965 Immigration and Nationality Act, which greatly reduced immigration restrictions that had been in place since the Immigration Act of 1924.

As noted, Easterlin (3, 7) argued that because of occupational segregation women did not compete for jobs with men and therefore had minimal impact on cohort competition. That was never completely true, since there were always some job sectors where women could substitute for men. By the late twentieth century, women competed with men in virtually every part of the economy, and so women must be included in any long-run analysis of labor-market competition. I present labor-force flows separately for men and women to distinguish the effect of the rise of female labor-force participation.

Easterlin also felt that many immigrants—particularly the undocumented—did not directly compete for jobs with American workers ((7), p. 34). Easterlin did not anticipate the surge in immigration that has taken place over the past several decades and therefore believed that immigration would have little impact on employment competition going forward. I calculate labor flows separately for the US-born and foreign-born populations.

Fig. 2 describes net decennial flows into and out of the labor force from 1910 through 2040 for men and women by age groups and nativity, as calculated from decennial census and American Community Survey data (4). Age groups refer to age at the end of each decennial interval. I project the labor-force estimates forward from 2024 to 2040, assuming constant mortality, net immigration, and age-specific labor-force participation (15). In the *SI Appendix* I assess the sensitivity of these projections to alternative demographic assumptions. Because the births have already occurred and mortality moves slowly, we can predict the demographic structure of the US-born working-age population over the next 15 years with considerable precision, but the flows into the immigrant workforce depend on the level of immigration.

Most inflows of the US born into the labor force occur at ages 16 to 29 as young people leave school and enter the labor force (Fig. 2*A*). This age group is approximately the same as the numerator of Easterlin's relative cohort size measure. Among US-born men, changes in decennial labor-force entries were largely determined by changes in cohort size, and the entry of the baby boom into the labor force peaked in the 1970.

Among US-born women, the change in decennial entries represents the combination of both cohort size and rising female labor-force participation. Most of the growth in US-born labor-force entries between the 1950s and the 1970s can be attributed to women, whose labor-force participation continued to rise until 2000 (14). Among both men and women, the number of young labor-market entrants dipped between 1980 and 2010 before reaching a second peak in the 2020s.

Changes in the flow of young foreign-born workers into the labor force (Fig. 2*B*) cannot be directly attributed to cohort size, although cohort sizes in their country of origin probably affected incentives to emigrate. Most of the dramatic fluctuations over the past century, however, reflect changing immigration policy. The peak labor-force entry of young foreign-born workers occurred from 1980 to 2020, the same period in which the inflow of US-born workers dipped. Accordingly, including immigrant workers tends to flatten the trend in labor-force entries, attenuating the drop in new workers after the 1970s and moderating the Easterlin effect.

Most exits from the labor force occur among those aged 50 to 99, the result of retirement, emigration, or death. Exits from the labor force among the US born ages 50 to 99 at the end of each decade (Fig. 2*C*) have increased every decade since the 1910s, with the sole exception of the 1940s. The pace of retirements accelerated after 2000, and I project that by the 2030s women will account for half of exits. Among the foreign born (Fig. 2*D*), I project a sharp increase in exits from the labor force in the 2030s, as the bulge of immigrant workers who entered the labor force in the 1990s and 2000s reaches retirement age.

Combining all age groups and considering both entries and exits from the labor force allows us to summarize labor flows. Among the US born (Fig. 2*E*), net decennial flows peaked sharply in the 1970s, and women accounted for most of the inflow from the 1960s to the 2000s. Immigrants exited the labor force more than they entered during the 1930s through the 1950s when immigration was sharply constrained (Fig. 2*F*). With the liberalization of the immigration law in 1965 there was a large influx of foreign-born workers. The peak inflow of foreign-born workers occurred during the decade from 2000 to 2010, and there was a sharp drop associated with COVID. I project a substantial outflow of foreign-born workers by the 2030s.

Fig. 2*G* combines the flows from 2 E and F to describe total net decennial entries into the labor force. The labor force expanded rapidly after 1960, reaching a net increase of almost 25 million workers in the 1970s. About half of this surge can be ascribed to the large cohorts of the baby boom, and about half to the increasing participation of women. There was a second peak in entries into the labor force in the decade after 2000, owing mainly to the spike in immigrant workers. Since 2000, net entry into the labor force has shrunk dramatically. I project that by the decade of the 2030s, net entry into the labor force will drop below zero.

Unlike Easterlin's measure of relative cohort size, labor-force flows are also affected by the demand for labor. When labor is in short supply wages rise, attracting additional people into the labor force. Conversely, when there is a glut of workers some people are unable to find a job and drop out of the labor force. The responsiveness of labor-force participation to demand for labor tends to attenuate the fluctuations shown in Fig. 2. Accordingly, the dramatic rise and fall in labor flows shown in Fig. 2*G* would have been even greater if labor-force participation had been constant.

Estimating Employment Competition. The labor-force flows in Fig. 2 are measured as the absolute number of workers, and there was substantial population growth over the period covered. In 1910 the usual working-age population, defined as ages 18 to 64, had 53 million people; by 2040 I project that population to number 205 million. To control for population change, we can measure the ratio of labor-force entries to the working-age population. Fig. 3*A* shows the combined net entries from Fig. 2*G* as a percentage of the average population of usual

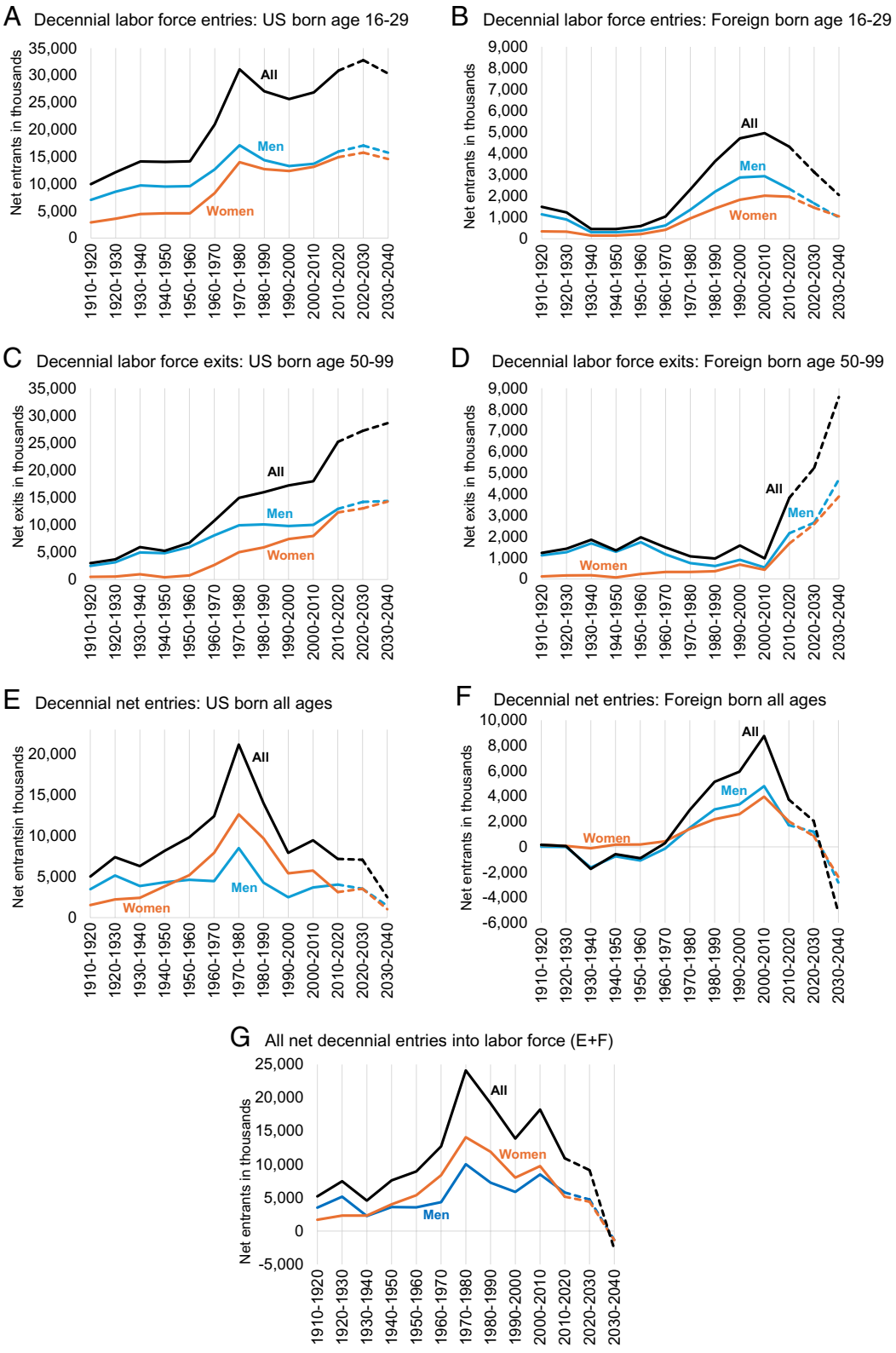

Fig. 2. Net decennial labor-force flows. Dashed lines indicate projections. (*A*) Net number of US born age 16 to 29 entering the labor force in the past decade, by sex. (*B*) Net number of foreign born age 16 to 29 entering the labor force in the past decade, by sex. (*C*) Net number of US born age 50 to 99 exiting the labor force in the past decade (*D*) Net number of foreign born age 50 to 99 exiting the labor force in the past decade (*E*) Combined labor-force entries and exits of all age groups, US born (*F*) Combined labor-force entries and exits of all age groups, foreign born. (*G*) Combined labor-force entries and exits of all age groups, including US born and immigrants.

working age in each period. Using the working-age population in the denominator provides a strictly demographic benchmark unaffected by labor-force participation.

Fig. 3*A* highlights the influx of workers that occurred between 1960 and 1980, as the large baby-boom cohort entered the labor force, female labor-force participation expanded, and immigration

Fig. 3. Labor-force flows as a percentage of working-age population. Dashed lines indicate projections. (*A*) Combined labor-force entries and exits of all age groups, including US born and immigrants, as a percentage of the population age 18 to 64 in each interval (*B*) Index of employment competition, measured as net entries into the labor force over the previous five decades as a percentage of the working-age population in the current period.

rose. It was difficult for the economy to absorb all the new workers, and wages for young people declined sharply after peaking in 1973.

Fig. 3*A* does not, however, provide a valid measure of labor-market competition. Economic opportunities immediately before the 1970s spike in the labor force were vastly better than immediately afterward. This is because the baby boomers and newly employed women and immigrants did not suddenly vanish after they entered the labor force; they kept working and occupying jobs until they eventually retired decades later. Like the pig in the python, the bulge of workers suppressed the appetite for new employment. The glut of workers entering the labor force in the 1970s would continue to stifle demand for new workers until their eventual exit from the labor force, a process that is still in progress.

The index of employment competition shown in Fig. 3*B* is intended as an alternative to Easterlin's measure of relative cohort size. It represents the cumulative net labor-market entries over the previous five decades as a percentage of the working-age population in the current decade. I selected a five-decade window for net labor-force entries because that interval is sufficient to encompass most working careers. In essence, the index compares the accumulation of past entrants to the labor force to the current size of the working-age population. Thus, for example, the 2010 index of employment competition captures all entries and exits into and out of the labor force over the period 1960–2010, including all baby boom entries into the labor force but relatively few baby boom retirements.

When cumulative net labor force entries are low relative to the size of the working-age population, then the demand for workers will be strong, all other things being equal. The temporal pattern of the index of employment competition differs substantially from Easterlin's relative cohort size measure. Because of the long window for net labor-market entries, the index reveals that employment competition continued to rise after 1980 even as relative cohort size declined (Fig. 1*B*).

The index of employment competition is entirely consistent with the wage trends in Fig. 1*C*: workers were scarce during the upsurge in young adult wages that took place between 1940 and 1970, and competition for jobs was consistently high during the long stagnation of wages between 1970 and 2010. The index of employment competition remained high until 2015, the year that wages for young adults reached their low point. Given the pattern of employment competition, it should be no surprise that wages for young adults declined for four decades after their 1973 peak.

Economic changes compounded the demographic challenges facing young workers between the 1970s and the 2010s. From the stagflation of the late 1970s to the great recession of 2007–2009, there was continuing erosion of union representation, globalization, and mechanization of production. If the demand for workers had exploded as Easterlin's hypothesis predicted, those events might not have mattered. But the pig in the python—the vast cohort of baby boomers—stood in the way of another golden age for young workers.

The Coming Transformation of the Labor Market. We are on the verge of a fundamental transformation of the labor market. Baby boomers began retiring in large numbers during the 2010s, and immigration began declining in the same period. The number of births went down 17% between 2007 and 2024, which will contribute to a reduction in the number of new entrants to the labor force in the 2030s.

In the current moment of political turmoil, any economic predictions spanning the next 15 years are highly uncertain. We can predict with some confidence, however, the general demographic configuration of the 2040 working-age population: the births have already occurred, mortality change is ordinarily gradual, and a massive surge of immigration seems unlikely. Other factors may affect the prospects of new workers, including recessions, sudden shifts in federal policies, and long-running economic trends like globalization and mechanization. It is possible, as some prognosticators contend, that artificial intelligence will dramatically reduce the demand for workers. It is also possible—or even probable—that the magnitude of the coming demographic transformation may be great enough to swamp such economic changes.

Barring revolutionary changes in the economy, the drop in labor-market competition over the coming two decades will have profound consequences. There is likely to be an unprecedented shortfall of new workers, creating strong upward pressure on wages. As shown in Fig. 1*C*, we are already seeing signs of an uptick in the wages of young workers, and as the demographic shortage accelerates we may finally see real wages of the young exceed the levels of the early 1970s. Americans born in the 2020s might be the first cohort in a half century that earns significantly more than their parents did. Labor-force participation will probably increase as more workers are pulled into the market by higher wages, and some workers will postpone retirement. The decline in labor competition should be a boon for labor organizing. There will be increased incentives for automation of both manufacturing and services. We can expect reduced inequality, especially generational inequality. High demand for labor will create pressure to expand immigration.

The unprecedented drop in employment competition may also have adverse consequences. Labor shortages may constrain economic growth, although there is some evidence to the contrary (16, 17). More critically, as Russell Baker foresaw in 1974 (2), the small working

population relative to the number of retirees will place enormous strains on Social Security and health care. That burden, however, will diminish as baby boomers fade from the scene; I project that the retirement-age population will begin to decline by the late 2030s.

Easterlin's relative cohort size hypothesis was oversimplified because it ignored the effects of retirement, female labor-force participation, and immigration. Nevertheless, it did identify a key mechanism: the relative number of people entering the labor force can have powerful implications for economic opportunity. Fluctuations in the number of workers entering the labor force were probably the most important drivers of the dramatic swings in wages from the 1940s to the 1970s (Fig. 1*C*) and had important consequences for marriage rates and fertility. But as the pig in the python is finally fully digested over the next several decades, the coming transformations may be even greater than the demographic and economic boom and bust of the mid-twentieth century.

Materials and Methods

Data. All data and materials are contained in the paper or in Dataset S1, except the IPUMS USA database, which is freely available (https://doi.org/10.18128/D010.V16.0). The unweighted number of cases for each population subgroup is given in Table 1. Sample densities vary from 1% to 10%. I used the largest high-quality samples available in each year, except in 1970 I combined four 1% samples (samples 197001 to 197004).

Measuring Median Wages for Young Workers. Fig. 1*C* is tabulated from the optimal source for each period, preferring annual data where available. I used IPUMS decennial census data for 1940–1960 (4), Current Population Surveys for 1962–2005 (5), and American Community Surveys (ACS) for 2006–2023 (4). The analysis is limited to wage earners working at least 35 hours a week for at least 40 weeks in the prior year. Prices are deflated using the Consumer Price Index for urban consumers (CPI-U) for 1939 through 1977 and the Consumer Price Index retroactive series using current methods (R-CPI-U-RS) for 1978 to the present (18). I used a three-year moving average to smooth annual fluctuations from 1962–2024.

Measuring Decennial Labor-Force Flows. Figs. 2 and 3 are based on a tabulation of the weighted number of persons in the labor force by age, sex, and nativity from the IPUMS decennial census (1910–2000) and ACS (2010–2020). The calculation of labor-force flows is in Dataset S1.

To estimate the labor force in 2020 I used the average of the ACS estimates for 2019 and 2021. Because of interrupted data collection during the COVID pandemic, the 2020 sample had record-high nonresponse rates. The Census Bureau developed a set of experimental weights based on administrative records to mitigate the problem (19), but still "does not recommend data users compare the 2020 ACS 1-y experimental estimates with our standard ACS estimates." Moreover, my focus is on long-run change; by combining data from 2019 and 2021, I minimize the impact of the brief but spectacular shock to labor force participation resulting from the pandemic. Because of a well-known enumeration anomaly in the 1910 female labor-force participation rates (20), I used linear interpolation between 1900 and 1920 to estimate the age-specific labor-force for women in 1910.

We cannot consistently measure the labor-force participation of persons under 16 or over 89, so I treat these age groups as nonworkers. Because the true number of persons in the labor force at these ages is very small, this simplification has minimal impact on overall labor-force flows.

To calculate Fig. 2 *A* and *B*, I measure net entry into the labor force over the course of a decade by US-born persons aged 16 to 29 at the end of the decade as

$$Enter_{y-10..y} = \sum_{a=16}^{25} l_{y,a} + \sum_{a=26}^{29} \left(l_{y,a} - l_{y-10,a-10}\right),$$

where $Enter_{y-10..y}$ is the net number of persons entering employment in the 16 to 29 age range during the decade preceding year y and $l_{y,a}$ is the number of persons in the labor force in year y at age a. The first term covers persons ages 16 to 25 at the end of the decade. Because I assume that zero persons under age 16 were in the labor force, the entire population ages 16 to 25 entered the labor force during the previous decade. For ages 26 to 29, the second term subtracts those who were ages 16 to 19 ten years earlier, capturing net change for that cohort.

To calculate Fig. 2 *C* and *D*, we can flip this around to measure net exits over a decade from the labor force of persons ages 50 to 99 at the end of the decade as

$$Exit_{y-10..y} = \sum_{a=50}^{89} \left(l_{y-10,a-10} - l_{y,a}\right) + \sum_{a=90}^{99} l_{y-10,a-10},$$

where $Exit_{y-10..y}$ is the net number of persons leaving the labor force in the age range during the decade preceding year y. These exits reflect retirements, deaths, and emigration. The first term subtracts the number of people in the labor force at ages 50 to 89 from the number who were in the labor force at ages 40 to 79 the decade before. The second term adds people ages 80 to 89 in the preceding decade, all of whom are presumed to retire by ages 90 to 99.

Table 1. Unweighted observations by year, sex, and nativity

	US born		Foreign born		
Year	Male	Female	Male	Female	Total
1870	163,585	164,816	29,532	25,425	383,358
1880	2,601,428	2,575,529	388,568	316,513	5,882,038
1900	1,678,895	1,644,352	287,501	242,104	3,852,852
1910	397,008	389,289	77,650	59,206	923,153
1920	458,985	451,050	77,619	62,980	1,050,634
1930	2,699,290	2,683,157	389,489	331,886	6,103,822
1940	610,047	613,290	67,520	60,875	1,351,732
1950	898,137	902,257	62,304	59,500	1,922,198
1960	4,143,404	4,282,520	263,753	275,929	8,965,606
1970	3,727,873	3,927,974	214,823	249,291	8,119,961
1980	5,117,808	5,414,269	380,368	430,675	11,343,120
1990	5,537,014	5,890,414	520,846	552,772	12,501,046
2000	6,070,427	6,398,213	799,329	813,497	14,081,466
2010	1,304,035	1,371,583	184,937	201,137	3,061,692
2019	1,387,419	1,428,521	200,913	222,700	3,239,553
2021	1,384,779	1,419,545	212,885	235,390	3,252,599
2024	1,449,853	1,490,794	229,793	252,448	3,422,888
Total	39,629,987	41,047,573	4,387,830	4,392,328	89,457,718

To obtain the total net entries into the labor force for all ages over the course of a decade (Fig. 2 *E–G*), we can just subtract the previous decade's total labor force from the current decade's total labor force:

$$Enter_{y-10..y} = \sum_{a=16}^{89} l_{y,a} - \sum_{a=16}^{89} l_{y-10,a},$$

where $Enter_{y-10..y}$ is the net number of persons entering employment at any age during the decade preceding year *y*.

To measure net decennial entrants into the labor force as a percentage of the working-age population, (Fig. 3*A*) I divide the total net entries into the labor force for each decade (Fig. 2*G*) by the working-age population at the end of the decade as tabulated from IPUMS (4),

$$NEP_{y..y-10} = \frac{\left(\sum_{a=16}^{89} l_{y,a} - \sum_{a=16}^{89} l_{y-10,a}\right)}{P_y} \times 100,$$

where $NEP_{y..y-10}$ is net entrant percentage in the decade before year *y* and P_y is the working-age population in year *y*. The index of employment competition (Fig. 3*B*), is the same, except instead of measuring net entries over the previous decade, we calculate net entries over the preceding five decades divided by the working-age population in the current year:

$$IEC_y = \frac{\left(\sum_{a=16}^{89} l_{y,a} - \sum_{a=16}^{89} l_{y-50,a}\right)}{P_y} \times 100.$$

The index of employment competition requires data on net entries into the labor force over five decades. The earliest national data on labor-force participation for the whole population dates from 1870, so the earliest data point in Fig. 3*B* uses data from 1870 to 1920. The 1890 census manuscripts were destroyed in a fire (21) so I estimated the age and sex-specific labor-force for 1890 using linear interpolation between 1880 and 1900.

Population Projections. To project labor-market flows through 2040 I forward survived the 2024 population using estimates of mortality and net international migration published by the Congressional Budget Office (15). I prepared separate projections for the US born and the foreign born. The base projections shown in Figs. 2 and 3 assume constant 2025 age-specific death rates and 2025 age-specific net international migration. I also assume constant 2024 age-specific labor-force participation rates, calculated separately by sex and nativity from the American Community Survey (4). The full projections for the US-born and foreign-born populations appear in Dataset S1.

To assess the sensitivity of the projections to demographic assumptions, I prepared alternative versions with varying migration and mortality rates. The details of the alternative projections appear in the *SI Appendix*. The results show what if we assume a massive increase in net immigration, from 410,000 in 2025 to 2.2 million by 2030 and 2.4 million in 2040, that would increase the total net entry into the labor force by 9.7 million in the 2030–2040 decade. Even under the highest level of immigration, however, the total net inflow of workers in the 2030s would still be the lowest since the decade of the 1930s. The Index of Employment competition would be only moderately affected, with an increase of 5.3 percentage points. Mortality is relatively unimportant; even substantial improvements in life expectancy have negligible implications for the labor force, because mortality is already very low at the usual working ages.

Data, Materials, and Software Availability. All data are included in the Supporting Information or are publicly available at (4).

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